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PENDULOUS CROP OF TURKEYS

By M. BACON, N.D.P.

THE condition known as pendulous crop occurs occasionally in a mild form in fowls, but the most commonly reported cases concern the classical symptoms that occur from time to time in turkeys. The condition is also referred to as baggy crop, dropped crop, hanging crop and sour crop, and causes mortality, poor development and emaciation within turkey flocks in some areas.

Symptoms

Usually, the first abnormality noticed is a slight dilation of the crop which often occurs on the first or second day of a heatwave. If the crop is emptied out its contents are seen to consist of a sour smelling fluid or semi-fluid. As the condition gets worse the crop may enlarge to the size of a football and in an advanced case may contain up to 30 per cent. of the bird’s weight. This great weight of fluid causes the muscles in the wall lining of the crop to rapidly deteriorate.

The enlarged crop also brushes against objects and loses its feathers so that the exposed skin may become raw. Further injury encourages other birds to pick at the inflamed crop. If the affected bird is not separated from its companions it is likely to die as a result of constant bullying.

According to one reference, death from pendulous crop may result from:

- lacerations in the crop area which cause the crop to rupture
- injury by pen mates
- mechanical pneumonia.

Causes

Pendulous crop results from genetic and/or local management factors, but its incidence is increased by hot climatic conditions. In some cases it is thought that pendulous crop occurs when coarse fibrous material blocks the passage of feed and water through the bird’s alimentary canal. However such a blockage causes a slightly different condition known as crop impaction.

Turkeys raised in inland areas often have a dam, in a sparsely vegetated paddock as their only water supply. Under these conditions the birds will not move across the hot, sandy ground to water, and instead will spend the day under whatever shade is available. They then move to water in the evening and drink an excessive amount at a rapid rate. The large water intake causes a slight dilation of the crop which, after a few occurrences, will distend so much that the muscles lining it are permanently damaged.

An 8-month-old female turkey with a pendulous crop of 5 months’ duration
In some instances birds with pendulous crop can survive for several years. However it is not economically worthwhile to retain them as their body condition can deteriorate rapidly and they become more susceptible to other ailments and diseases. For this reason any birds with the condition should be marketed at the most economical age. On no account should they be used in a breeding programme.

Post mortem appearance
As mentioned earlier, the contents from a pendulous crop have a sour odour. This odour becomes stronger and more unpleasant as the condition progresses. A post mortem examination will also show that the mucous membrane of the crop lacks tone and is thinner than normal. After a bird has been affected for some months the membrane becomes congested, inflamed, and covered with a cheesy material.

Treatment
If the birds are affected before reaching the normal marketing age it is important to keep them in good condition until marketing is economical. This is not always possible but there are several methods of treatment:

- Dilated crops have been removed surgically according to some American reports. However this method is not practical as it requires a local anaesthetic and should be performed by a veterinary surgeon.
- A truss, such as a stocking, can be fitted over the crop to prevent further dilation
- In mild cases the bird can be held upside down and the crop manipulated to cause the bird to regurgitate the crop's contents. This method won't necessarily cure the bird but will help keep it alive until marketing
- A veterinary stomach pump can be used to empty the crop and the skin over the crop can then be sewn in a “brisket stitch” (sewing through the skin but not through the crop) with the surplus skin left hanging in a brisket-like fold. This gives support to the crop and helps prevent further dilation.

It must be pointed out that these treatment methods are time consuming and not always completely successful. For these reasons they are only warranted when the birds are to be kept for a short while before marketing.

Prevention
The main methods of prevention are based on the two causal factors, i.e., heredity and management. Affected birds should be discarded and susceptible birds, both male and female, should not be used for breeding.

Special attention should be paid to water supply. Water must be freely available close to shaded areas. Water troughs should allow for at least 10 linear ft. of drinking space per 100 adult birds to provide a normal intake of approximately 15 gallons per 100 birds per day.

A correctly balanced diet should be fed at all times. Although diet does not usually cause pendulous crop, experiments have shown that high levels of glucose monohydrate in the diet can produce up to a 100 per cent. incidence of the condition.

Summary
Generally speaking, pendulous crop does not cause great economic loss to the turkey industry as a whole but it can be a problem in some situations. In hot areas special attention should be paid to shade, water and diet. It is not usually worthwhile to try and cure affected birds and it is better to concentrate on preventing the problem by breeding out the weakness.
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