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NebFact

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Ascites Syndrome in Broiler Chickens

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Many Nebraska farm families typically raise one or two flocks of meat chickens a year for home consumption. This NebFact explains the number one cause of broiler death in home flocks and how to prevent it.

In the past few years, a new disease problem has occurred in home broiler flocks. The disease is called ascites syndrome. Owners typically observe an increase in death loss from three weeks to market. Anywhere from 10 percent to 60 percent of a flock may become affected. Ascites is the medical term used to describe the large amount of fluid that accumulates in the abdominal cavities of the birds that die with this disease. Other changes that are seen are purple discoloration of skin, enlarged livers, dark red lungs, and greatly dilated, flabby hearts. Essen-tially, the cause of death in the birds is due to heart failure and lack of oxygen to the tissues.

Genetically, the modern broiler is very prone to develop the illness. This is probably due to the bird's exceedingly fast growth rate and high oxygen demand. Some researchers have shown that in modern meat breeds the growth rate and muscle mass have greatly increased, while the size of the bird's heart and lungs have not kept pace. These factors, along with inadequate oxygen during growth, 24-hour-a-day feeding, and 24-hour lights have resulted in home flocks losing large numbers of birds to heart failure and ascites.

Several measures can be taken to reduce the incidence of ascites syndrome in flocks:

1. Switching to a dual purpose meat bird may be helpful. Observations have shown that breeds of chickens besides the broiler Cornish cross are not as sus- ceptible to ascites syndrome.
2. Improving ventilation in the barn is very important. lack of adequate air exchange is considered by many to be one of the most important factors leading to this disease. Temperatures are frequently cold at night, especially in early spring, tempting flock owners to tighten up the buildings to conserve heat. This may result in inadequate oxygen to the chickens. Improving ventilation to the birds means having a source of fresh air coming in and a way to move the stale air out of the building. Simply having a crack or two in the door on one side does not promote air circulation in the barn. You may need to add some inlets and a fan to draw fresh air across then out the barn. It

is best to consult your county educator or a agriculture engineer to help you design a suitable ventilation scheme for your brooder.

3. Raising broilers during a warmer time of year when good ventilation is easier to achieve will help reduce the incidence of ascites.
4. Reducing the growth rate in the birds is believed to help prevent ascites. This can be done in a number of ways. A) remove the feed from the birds at night, B) cut out feeding supplemental grain as well as eliminating night feeding, or C) cut back the diet to feed only 90 percent of the total estimated intake. Although the birds will achieve desired weight at a slightly later age with these plans, death loss from ascites should decrease.

It is important to remember that the heart muscle damage to the birds from inadequate oxygen starts the very first week of the chick's life. Day old baby chicks need oxygen as much as the older birds! Ascites syndrome deaths occur after the third week of life because the heart cannot keep up with the demands of rapid growth and heavy body weight. Making management changes **after** the second or third week will probably not reduce the incidence of ascites!

Growers experiencing death loss in their broilers are encouraged to consult their local veterinarian or cooperative extension poultry specialists before assuming their problem is due to ascites. Other infectious and non-infectious diseases occasionally cause death. A diagnosis should be made by a qualified professional before consuming the meat.

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