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## ***BROILER TIP . . .***

### **LEG PROBLEMS IN BROILERS**

With the advancements in the genetics of broilers combined with improvement in the diet, enhanced feed conversion efficiency and growth rate have been observed in broiler chickens. The result is a bigger bird with a larger breast muscle than their ancestors. Scientists have associated this increased growth rate to the increasing skeletal and leg problems that are currently observed in growing broiler. Of course, rapid growth rate is not the only cause of leg problems in broiler chickens. Nutritional imbalances, mechanical trauma and environmental factors can also play a role. These skeletal disorders observed in broiler birds are associated with lameness due to pain and or biomechanical dysfunction which results in poor growth, culled birds, increased mortality from starvation and dehydration and also increased carcass condemnation and downgrading at slaughter. Birds are also at greater risk of being trampled and killed during loading and transportation for slaughter. All broiler flocks contain birds with skeletal abnormalities. In the United States up to 6% of broilers may have obvious skeletal abnormalities and losses of up to 2% their flocks due to lameness can be seen.

Angular bone deformities occur when the legs become bowed in or out, and may even be twisted. This problem is the most frequent cause of lameness in broiler chickens and possibly accounts for 60% of the skeletal disease in chickens. Angular bone disorder can be observed in the flocks from as early as 6 to 8 days old resulting in crippled birds that are unable to reach the feed or water. As the flock ages these birds are more easily identified since they are much smaller and have not developed as well as the rest of the flock. Some birds will die from hunger and other may be condemned due to atrophy of the muscles in the affected legs. Other problems associated with the legs such as Tibial Dyschondroplasia, can be observed in chickens as late as 4 weeks of age. The weight of the bird compresses the legs causing painful lameness. Up to 30% of the flock can be affected; however, most birds show no clinical signs of the disorder. Both Angular bone deformity and Tibial Dyschondroplasia have been associated with rapid growth rate because the birds gain weight at a faster rate than the skeletal structure is able to mature. Slowing the growth rate during the first 1 to 2 weeks by reducing feed intake can reduce the incidence of leg problems in a flock; however, this could lower dress weight at slaughter.

#### **PUTTING KNOWLEDGE TO WORK**

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Avoiding a low Ca:P ratio in the diet have shown to reduce the incidence of leg problems in flocks. Mechanical trauma associated leg problems is more prevalent in fast growing chickens. Specifically handling the birds during the catching can result in femoral head necrosis whereby the head of the femur ruptures causing hemorrhaging. Upon arrival at the processing plant these birds will be found in the cages either dead or dying. This situation can be minimized with the use of the new reaping machines which remove direct human contact with chickens during the clearing out process.

There is some disagreement as to whether or not rapid growth increases the incidence of leg problems. However; most of the reported data indicate a positive relationship between growth rate and leg problems with the incidence being generally higher in males than females. With this in mind producers need not be alarmed when a small percentage of their birds appear to be affected with leg problems, because the savings in feed cost and time will outweigh the loss of a few birds. Slowing the growth rate by reducing feed intake has been shown to reduce leg problems in broiler flocks. Finally, implementing good management practices such as lighting programs, good litter or floor conditions, good air quality, and biosecurity can be used to reduce leg problems in broilers.



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\*\*Consult with your poultry company representative before making management changes.\*\*

“Your local County Extension Agent is a source of more information on this subject”