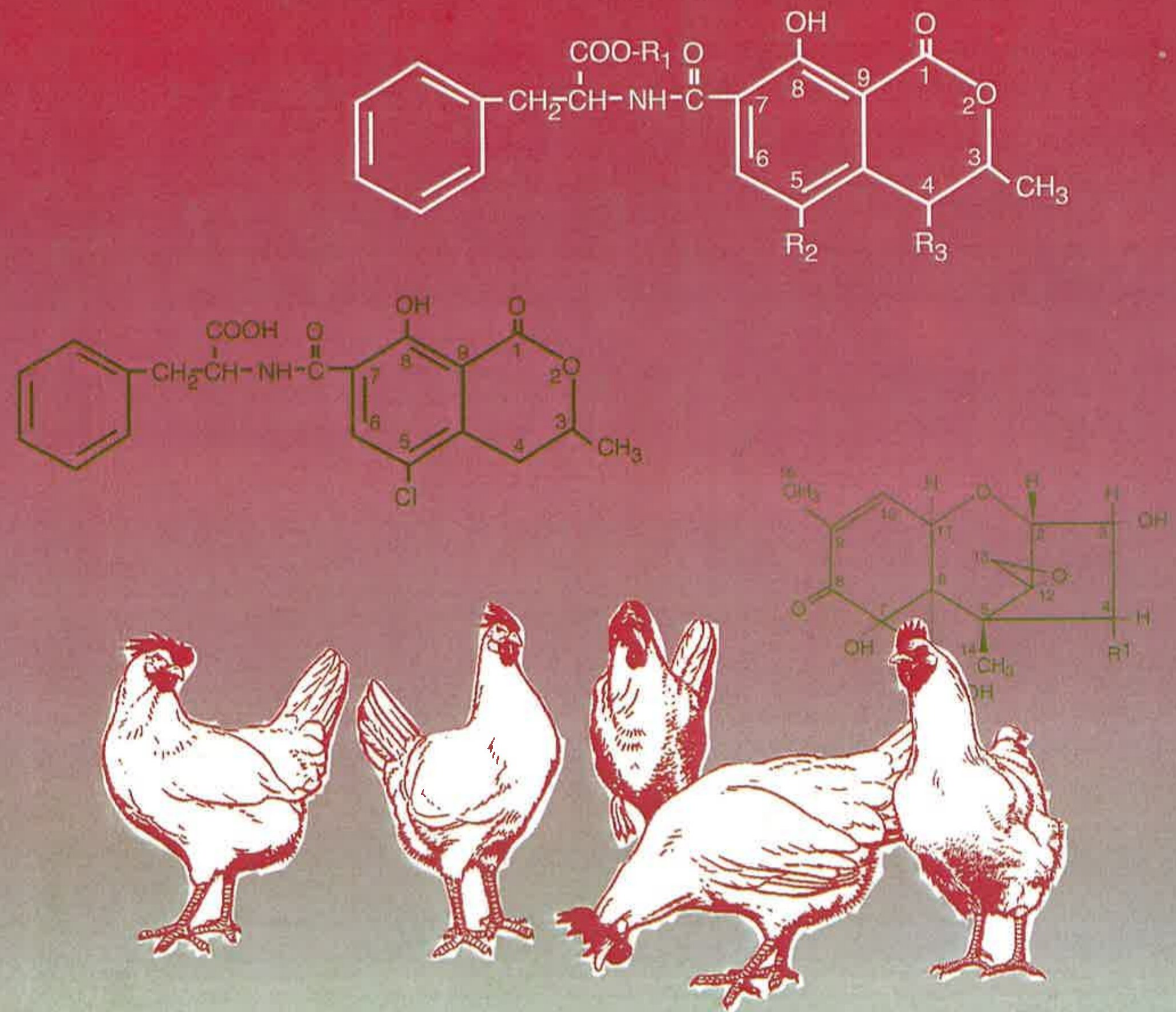


# POULTRY METABOLIC DISORDERS AND MYCOTOXINS



*S. LEESON, G. DIAZ, AND J.D. SUMMERS*

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## CHAPTER 1. SUDDEN DEATH SYNDROME

<b>Other names:</b>	ACUTE DEATH SYNDROME FLIP-OVERS
<b>Species:</b>	BROILER CHICKENS CONDITIONS REPORTED IN BROILER BREEDERS, TURKEY BREEDERS

### 1. COMPENDIUM

Sudden Death Syndrome (SDS) is a condition afflicting fast growing broiler chickens, and especially males. Normal incidence is 1.5-2.5% of the flock and from 21-28 d will usually be the major cause of death. Afflicted birds appear healthy, are well fleshed and invariably have feed in their digestive tract. Death occurs within 1-2 minutes, the birds most frequently being found dead on their backs. There are few changes in gross pathology. The heart may contain blood clots, that are likely post-mortem in origin, and the ventricles are usually empty. Diagnosis is usually by exclusion of other diseases. Lungs are often edematous, although this usually occurs when birds spend time on their backs and fluid drains to the lung region by gravity. There are no specific changes in the tissue or blood profile that can be used for diagnosis. The condition is precipitated by fast growth rate, and so conversely it can be prevented by varying degrees of nutrient restriction. There are no clear relationships between any diet nutrients, ingredients and/or environmental factors that correlate with the onset or incidence of SDS. The condition seems to be more prevalent when ionophore anticoccidials are used or if the diet contains a readily available carbohydrate source such as glucose. SDS can be artificially induced by intubating with lactate, although the timing of onset can be modified by diet.

The condition can best be prevented or reduced in incidence by inducing a period of initial slow growth. This can be achieved by reduction in daylength, physical feed restriction and/or the use of low-nutrient dense diets. Economics dictate the degree of early growth suppression to be implemented. With 10-15% reduction in 20 d body weight, birds seem able to show complete growth compensation by 42-49 d.

### 2. OCCURRENCE AND GENERAL SIGNS

Sudden death syndrome is a cause of mortality in apparently normal, fast-growing broiler chickens. Birds, which are most often males, are usually found dead on their backs with wings outstretched. The condition rarely occurs in other domesticated birds, although there

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