

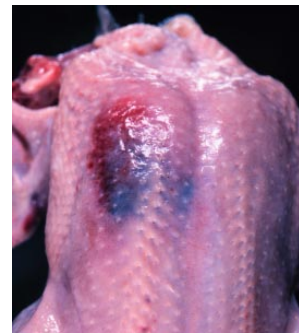


Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION – APRIL 2008

Aging Bruises

Almost one-half of all carcass trims and downgrading in broiler chickens is due to bruising or blood splash. If the age of bruising can be determined, then investigations into potential location(s) and causes(s) can be carried out to improve carcass quality. Bruising results from broken vascular integrity in the tissues (usually due to a trauma). The blood then seeps into the surrounding tissues, giving it the bright red appearance. As the bruise ages, the pigment that gives the blood its red color (hemoglobin) is slowly broken down to other pigments with green (biliverdin) and yellow (bilirubin) colors. This color transformation can be used to estimate the age of bruises in poultry:



Time	Color
min	Red
12 hr	Dark Red-Purple
24 hr	Light Green-Purple
36 hr	Yellow, Green-Purple
48 hr	Orange
72 hr	Yellow-Orange
96 hr	Slight Yellow
120 hr	Normal Color

Actually, this is a natural process that takes place continuously in the body, as the hemoglobin from red blood cells that become too fragile to exist (average life span is 28 days in chickens) is degraded to the yellow and green pigments subsequently trapped in the liver and excreted via the bile.

Using color to age bruises has been extremely effective in assessing bruising problems under commercial conditions. Unfortunately, a large

proportion of bruises occurs during the period from catching to processing (i.e., <12 hr prior to slaughter) and the precise timing of these bruises often require histological examination of the affected tissues.



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