

**INVESTIGATION FACTORS THAT
AFFECTING WEIGHT LOSS OF LIVE
BROILER BIRDS AND PACKED BROILER
CARCASSES**

Imesha Dilshan Rammuni Arachchi

**Animal Science Technology Degree Programme
Faculty of Animal Science and Export Agriculture
Uva Wellassa University, Sri Lanka**

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Abstract

Weight loss of both live broiler birds and packed broiler carcasses are the major problems at medium and large scale broiler processing plant. Weight loss of live broiler birds are not an individual factor and it is combination of various factors. When considering factors affecting weight loss on live broiler birds, holding temperature, holding time, RH, holding density and bird health states are highly affect on it. When considering all factors, holding time and holding temperature mostly depend on weight loss of live broilers. One of the main objective of this research was find the optimum time – temperature combination for live broiler birds holding prior to process at the processing plant. Other objective was find the most effective sealing type for sealing packing broiler carcasses.

First experiment was conducted achieving the first objective. four different holding temperatures (26 °C, 28 °C, 30 °C and 32 °C) and eight different holding times (30mins, 1 hr, 1 ½ hr, 2hr, 2 ½ hr, 3hr, 3 ½ hr and 4hr) were used as treatments according to literature. Firstly room temperature was adjusted to individual treatment and each three replicates (30 live birds with plastic boxes) were kept during several time treatments. Weight losses of each replicates were calculated using before holding weight and after holding weight. According to ANOVA statistical analysis method, 150 minutes holding time under 26 °C or 28 °C holding temperature were selected as optimum time temperature conditions. Second experiment was conducted to find the most effective sealing type when sealing broiler carcasses. Each 3 replicates were used for four different sealing types. (tape sealing, hand machine sealing, vacuum pack sealing and both vacuum pack and Cryo-vac packing). All treatment having same blast freezing time duration and lowest weight showed vacuum pack sealing and cryo-vac sealing.