

**STUDY ON DETERMINATION OF
RELATIONSHIP BETWEEN PHYSICAL
FACTORS AND PELLET DURABILITY OF
POULTRY FEED**

A dissertation submitted to the
Faculty of Animal Science and Export Agriculture
Uva Wellassa University
in partial fulfillment of the requirement of
the degree of
Bachelor of Animal Science

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2013**

ABSTRACT

Feed is an essential component needed for the animals required to maintain their growth and promotion and also to optimize their production. Therefore, feed manufacturers are tending to provide quality and safety feeds to the animals throughout their production time using modern feed manufacturing techniques. In modern feed industry pelletizing is the most common and popular method of feed processing which reduce waste, improve palatability, improve digestibility and allow larger meals to be eaten in less time. Because of the changing of physical factors during processing quality of the pellet feed has been reduced and accordingly it creates more fine particles of the feed which lead to feed handling problems, increasing feed wastages, reduction of feed conversion ratio as well as reduced the market demand of animal feed. Physical conditions during feed processing including conditioning temperature, steam pressure, cooling temperature, moisture before condition and moisture after condition were measured to determine the relationship between Pellet Durability Index at each manufacturing process. Results revealed has shown the physical conditions such as moisture before condition, moisture after condition, steam pressure and conditioning temperature are directly affect to the pellet durability. Therefore, particular conditions should be maintained at the optimum level to maintain the good pellet durability of feeds. Cooling temperature was not shown any relationship with Pellet Durability Index. The most critical factor affect to the pellet durability is moisture before condition and therefore it should be maintained at the optimum level in selected ingredients during feed manufacturing to achieve high pellet durability.

Key words: Pellet durability, Physical factors, Poultry feed