






The effect of feed transportation distance and feeding management (cylindrical feeder vs. automatic feeder) on the durability and length of broiler pellets.

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Abstract

Pellets have advantages over mash, but the amount lost due to disintegration into small, fine particles exceeds 10% of the amount provided in the feed meal, which is undesirable from an economic standpoint. Therefore, the aim of the study. Finding the effect of the distances of transporting feed pellets from factories to fields (443 km, 463 km, and 595 km) and The effect of eating the feed offered to chickens (cylindrical feeders and automatic feeding lines) on the durability and length of the pellets and evaluate the performance of the locally manufactured durability testing device. The results show that is an effect of the transportation distance on the durability of the pellets, which does not exceed 2.5% if the distance exceeds 150 km and 50% of the full length can be retained. The line of feeding is superior to traditional methods. The method of providing feed using the cylindrical feeder recorded a high percentage of dust and broken particles, less than 3 mm.

Key words: Pellets , durability , chicken's feeder, fine particles .

1 - Introduction

Pellet has become the most widespread and preferred method of feeding farm animals. Feed pellets are distinguished from mash feed by adding unpalatable and very fine ingredients (such as concentrated food additives and medicines) to the pellet manufacturing paste. This manufacturing method prevents the animal from separating the preferred particles, while the feed in the form of mash can easily separate its components by the animal and leave the preferred particles, which leads to wastage of feed, in addition to the preference for large-sized particles (larger than 2-8 mm) by the chicken regardless About the quality of feed in terms of nutritional value [1]. Although there is no effect of providing the feed meal in the form of pellets or mash on the feed conversion factor and consumption rate [2], pellets are the least wasted and the best physical formula for feeding chickens due to their well-known advantages [3]. Any field owner and scientific researcher seeks to avoid wasting feed (mash or pellets) because feed constitutes more than 70% of the total production cost. There are many reasons for wasting feed, and the researcher [4] divided them into direct and indirect causes. The loss of feed through direct causes ranged from 5-15% of the total feed consumed annually, and we can estimate that 4% is due to volatile feed such as dust and falling on the litter (waste). As for the indirect causes, they are estimated at a rate ranging from 11-22% and are due to excessive nutrition, diseases, and poor environment.

There are many factors that affect feed loss in the form of dust, feed loss, pecking and separation of components by chickens. The method of manufacturing feed pellets and the type of raw ingredients included in the feed dough have a major role in the final physical specifications of the feed, such as durability, hardness, lengths of the pellets, and their density. The percentage of breakage in feed pellets

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