

A Review on Slatted Floor and Conveyor Belt

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Abstract: This paper contains a review about the plastic slatted floor used for poultry farming. The findings of this study suggest that perforated plastic floors could be a good alternative to substitute wood shavings to raise broilers (male and female) since it was efficient from the perspective of environmental conditions and production rates, promoting a better quality environment and superior production rates.

However, more research must be conducted to study the effects of perforated plastic floors on poultry welfare aiming to improve leg health, reduce foot pad dermatitis and lameness of animals reared in this system. Litter quality has a significant influence on performance and foot pad health in fattening broilers. Minimizing the contact between birds and poultry manure seems to favour the performance and foot pad health in turkeys. Slatted plates could give the littered areas an added value for the realization of natural behavior in birds. Together, this could benefit their health and performance, too. Belt conveyor is most populous equipment in such system to achieve material flow from start to end point. We studied different type of conveyors and their configuration and there working. Selection of conveyor system is carried out according to functional requirements, size shape and weight of material, travelling distance, speed requirements, etc.

Also this system reduces the human effort. This system is beneficial and safety for the material handling.

Keywords: automatic cleaning, conveyor belt, flooring design, foot pad health, hygienic poultry, slatted floor.

1. Introduction

The poultry farming is very important business in India. It is considered as a good side business for farmers. In India poultry farming mostly includes hens and cocks. The main aspect of the project is to automate the process of transportation of the material to the respective litter collector. The plastic slatted floor is now a days used for farming. It helps to maintain a cleaner floor for birds so that the diseases will be reduced to minimum and the death ratio will reduce and profit will be maximum. Poor farmers cannot afford advanced poultry culture; to help them semi-automatic poultry is required. In semi-automatic poultry farm slatted floor is used. In two days fast moving, highly competitive industrial world, a company must be flexible, cost effective and efficient to survive.

The properties of plastic slatted floor are listed as below:

1. Pure starting materials (plastic) an injection molding, divided into brood floor, poultry floor.
2. Corrosion resistance, aging resistance. In the original package compound added antioxidants, anti-aging agents, anti-UV agents.

3. Easy to clean and disinfect, easy washable, even with a high concentration of acidic or alkaline disinfectants, will not corrode.
4. Use a good rate of 8 - 10 years.
5. The floor joists reinforced plastic extrusion molding, into a conservancy joists Conservancy machine Conservancy joists.
6. Disposable Conservancy height during installation, can be adjusted.
7. Birdhouse Conservancy machine conservancy channel, the best control in less than two meters
8. Apply to chickens, ducks, geese, as well as fattening chickens, ducks, geese, and breeders.9. recyclable after cleaning and then add some crushed raw materials and chemical agents modified, by injection molding to the floor again after, but also with about 6 years.

2. Literature Review

The contact of the birds' feet with litter and their excreta during the fattening period might lead to reduced body weight, carcass weight, feed intake, and impaired foot pad health in poultry. This study was performed to evaluate the influence of different flooring designs with reduced (50% or 100% slatted floors) contact to the excreta on the above-mentioned parameters in the fattening of broilers. Using fully-slatted flooring in fattening turkeys led to a higher body weight, while reducing incidence of injuries of foot pads. It is, therefore, necessary to consider how a similar excellent litter quality can be achieved in basically littered husbandry systems common in Europe.

Poultry rearing on perforated plastic floors and the effect on air quality, growth performance, and carcass injuries (Eduardo Alves de Almeida, Lilian Francisco Arantes de Souza, Aline Cristina Sant'Anna, Raphael Nogueira Bahiense, Marcos Macari, and Renato Luis Furlan)

Effect of different flooring designs on the performance and foot pad health in broilers and turkeys (Bussarakam Chuppava, Christian Visscher and Josef Kamphues)

Design of belt conveyor system (Sayali Todkar, P. G. Student, Milind Ramgir, S. P. Das, M. C. Pal)

A Review of Automatic Conveyor System (Avinash L. Nandivale, Omkar D. Kumbhar, Aniket R. Kherade, Amar V. Kolekar, Shubham D. Hankare)

It was efficient from the perspective of environmental conditions and production rates, promoting a better quality environment and superior production rates. However, more research must be conducted to study the effects of perforated plastic floors on poultry welfare, aiming to improve leg health, reduce foot pad dermatitis and lameness of animals reared in this system.

3. Future Scope

1. Improved design of the slatted floor could help to achieve lighter weight and it will utilize less material and hence become cheaper.
2. Advanced methods such as sensors, automatic feeder, water feeder, weight detection, foot pad detection, red eye detection can be used.
3. Due to advanced technology feed conversion ratio increases and death per hundred birds decreases.

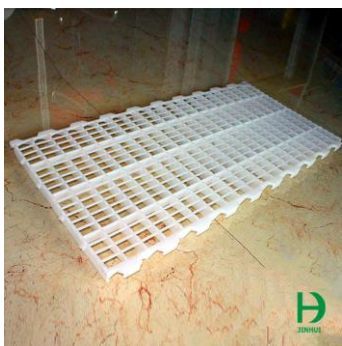


Fig. 1. Plastic slatted plate



Fig. 2. Conveyor belt

4. Conclusion

From above literature analysis we conclude that the slatted plates used in poultry farming reduces the diseases in poultry. And ease of operation is also increased. The conveyor system used in poultry helps to maintain hygiene and it reduces the diseases that occur in birds and as well as the human we work in poultry for cleaning purpose or any other purpose.

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