

## عنوان مقاله:

Genotypic Characterization of Fungal Species Isolated From Broiler Breeder Chickens, Dead-In-Shell and Hatched Chicks

## محل انتشار:

مجله علوم طیور، دوره 6، شماره 2 (سال: 1397)

تعداد صفحات اصل مقاله: 10

## نویسندگان:

Radwan IA - *Bacteriology, Mycology and Immunology Department, Faculty of Veterinary Medicine, Beni-Suef University, Beni-Suef ٦٢٥١١, Egypt*

Ahmed RSA - *Animal Health Research Institute, Beni-Suef Branch, Beni-Suef ٦٢٥١١, Egypt*

Hassan MA - *Mycology Research Unit, Animal Health Research Institute, P.O. Box, ٢٦٤, Dokki, Giza ١٢٦١٨, Egypt*

Ali A - *Poultry Diseases Department, Faculty of Veterinary Medicine, Beni-Suef University, Beni-Suef ٦٥٢١١, Egypt*

## خلاصه مقاله:

To investigate the prevalence of fungal agents in local Egyptian broiler breeder chicken's premises, tracheal and cloacal swabs from chickens, feed, and water samples were collected. The targeted breed s dead-in-shell eggs and newly hatched chick's samples were also tested. All fungal isolates were morphologically typed and the predominant fungal species were further subjected to molecular typing using PCR-RFLP and gene sequence analysis of the  $\beta$ -tubulin gene. Results revealed a high prevalence of fungal isolates in tracheal and cloacal swabs (39.3 - 48.1%) and feed and water samples (37.5% and 28.6%, respectively). Fungal isolation rates in dead-in-shell eggs of all breeds were high except in Dahaby breed. *Aspergillus* species including *A. niger*, *A. flavus*, and *A. terreus* were the predominantly isolated fungi from all collected samples. The  $\beta$ -Tubulin genes PCR-RFLP of selected *Aspergillus* isolates showed a characteristic restriction pattern for each species; however, the method was unable to distinguish between strains. The  $\beta$ -tubulin gene phylogenetic and sequence analysis of selected *A. flavus*, and *A. terreus* from breeder chickens and their hatching chicks indicated their relatedness to isolates from bronchopulmonary Aspergillosis in humans in the Middle East. In conclusion, the *Aspergillus* species remains the most prevalent fungi in breeder chickens, their incubated eggs and hatched chicks indicating their widespread in hatcheries. The PCR-RFLP is an easy tool to discriminate between *Aspergilli* species, however, the  $\beta$ -tubulin sequence analysis more descriptive of potential sources of fungal contamination. Further epidemiological studies are needed to monitor avian and human *Aspergilli* in poultry houses with a special focus on antifungal drug-resistant strains.

## کلمات کلیدی:

Hatchery, *Aspergillus*, Dead-in-shell,  $\beta$ -tubulin gene, Broiler breeder chicken

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/938973>



