



# Mycological Evaluation and Mycotoxin Contamination of Swine and Poultry Feed-Shelf Life Assessment in Makurdi, Nigeria



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## Editorial

Especially dangerous contaminants in meat and animal products occurring under natural conditions are the mycotoxins - the secondary metabolites of microscopic fungi, which are characterized by high toxicity and varied action in the animal and human organism. Mycotoxins are a major environmental and social health problem worldwide. Investigation and analysis of animal contamination products is an important and current issue that the authors of this article have stopped.

The studied meat is from Broiler starter, Broiler finisher, Chick mash and Layer mash which are collected on a weekly basis from the University of Agriculture Makurdi (UAM) animal farm in Nigeria. Local cultural practices in the present area of Nigeria, climatic conditions including high humidity environment, which are a prerequisite for intoxication consumed pork and poultry by mycotoxins encourage authors to conduct a study on the potential for the development of these harmful fungi in the preservation of the food products. The aim of the survey of the authors is to provide an adequate shelf life for pork and poultry meat within the geographical area under consideration.

## Structure and Content of the Paper

The abstract describes the problem of contamination of food products with mycotoxins, clearly defining the problem and purpose of the study. The location and conditions of the study are accurately described. The results of the study, supported by values obtained by the authors, are accurately and clearly presented. The abstract is well structured and describe the major findings of the article and why they matter. The introduction briefly described the state of the art of the problem and short description of related works in this study area. In the contribution is described the problem with climatic conditions in the geographical region of Nigeria and their influence on the contamination of pork and poultry meat with fungi. Then the aim of the work is defined. As an option, in their next articles, the authors might define the structure of the paper, after the defined aim. Another option is to create section with

related works that present the current findings in this study area before the "Material and methods" section.

The Material and methods section contain description of sources of the samples used; method for moisture content analysis; Mycobiota determination method; Mycotoxin production; Statistical analysis. This section is complete and comprehensive. The statistical analysis is conducted with P-level <0,05.

The results section describes findings of the authors. The results are correctly described by ANOVA and descriptive statistics. In their next works these researchers can include methods like Principal Component Analysis, Correspondence analysis that present results with graphical means, which will make it easier for the reader to use the received data.

In the discussion section the results are compared with those available in literary sources. 9 results from other authors are taken into account. The conclusions are included in this section, where the authors summarize their results and provide guidance on how to apply methods that will greatly avoid meat contamination. The reference literature sources are 15 from 1988 to 2011. All of the references are correctly cited in the text except the paper of Gremmel, 2004 which is not shown in the literature sources. The analysis of cited literature sources, presented on (Figure 1) shows that they are cited in the text no more 2 times, which indicate that the authors cite correct sources used and present their unique work. The period of the literature used is 23 years and in the next 7 years (2011-2018) there are not publications in this study area, which shows that the authors are looking at a topical issue about the geographic area surveyed.

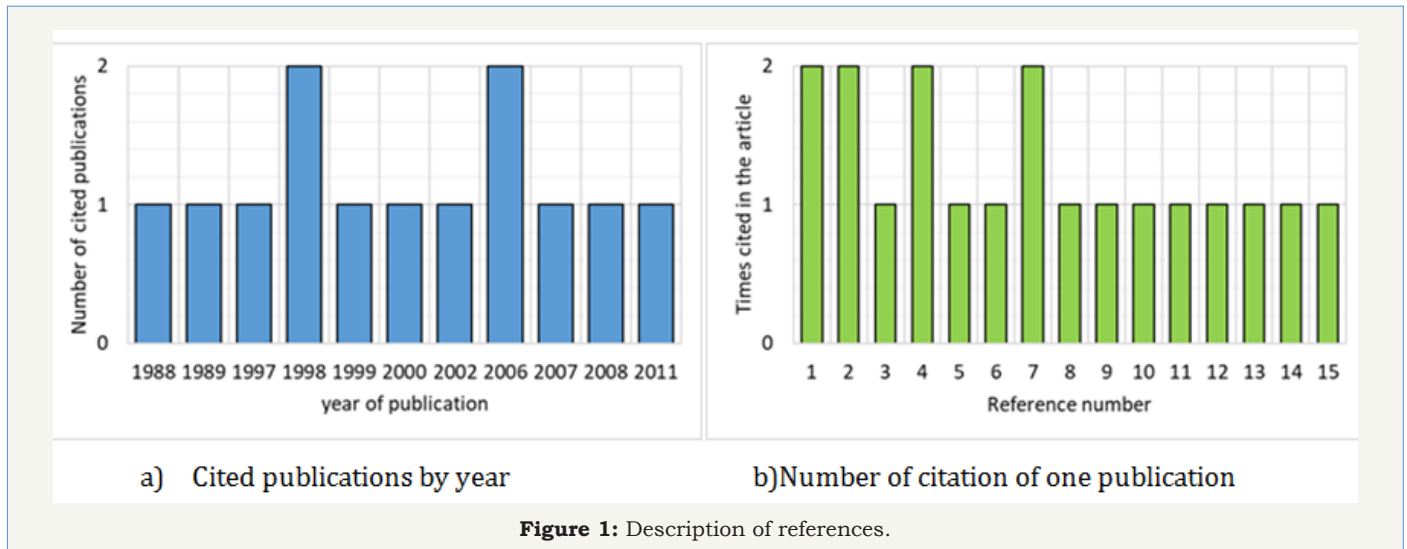
## Conclusion and Recommendations

The presented article consists sufficient data that support the author's generalizations. The purpose of the survey is fully implemented. Adequate shelf life for pork and poultry meat is defined. This is confirmed by the authors' utterly adequate view that

improving the conditions for storing food for animals used for meat, which will reduce the possibility of developing pathogenic bacteria and fungi. The question that remain unanswered is that the shelf life of the meat depends on the development of the region where the animals are fed and kept. this is a prerequisite for further research on the impact of the region on the risk of meat contamination. The article possesses interest first of all for producers of animal feed, meet processing and of course the consumers and want to make sure their operations are established at a high level of food safety.

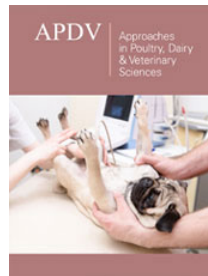
Stated succinctly, the article is a statistical extract, which does seem to be connected to recent events in the Nigerian economy, at least there is good background mentioned in the article.

As an option for future studies improvement of the authors work, non-contact measurement technics as image processing, spectral analysis and ultrasonic methods can be implemented for fast and non-destructive determination of contamination of poultry and swine meet that to be given in a laboratory for deeper physico-chemical and microbiological analysis.



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