TITLE: MICROBIOLOGICAL EVALUATION OF DIFFERENT ANIMAL MEAL USED IN INDUSTRIAL POULTRY FARMING

AUTHORS: MELO, F.P.; CLEMENTE, S.M.S.; SILVA, P.O.; RENOVATO, R.S.; MATIAS, H.V.; BUGARIM NETO, C.A.; VILELA, S.M.O.; MOURA, A.P.B.L.; PINHEIRO JÚNIOR, J.W.; BARROS, M.R.;

INSTITUTION: UNIVERSIDADE FEDERAL RURAL DE PERNAMBUCO, RECIFE, PE (RUA DOM MANUEL DE MEDEIROS, S/N, DOIS IRMÃOS, CEP 52171-900, RECIFE – PE, BRAZIL)

ABSTRACT:

The poultry sector in their productive activities, generates waste that can be processed and lead by-products, and these are used in animal feed, giving it greater economy and feasibility in obtaining rations. The ingredients of animal origin frequently used in broiler diets are meat meal (MM), of viscera (VF), feathers (FM) and blood meal (BM). As an integral part of the food chain to feed must have your toilet-sanitary standard of quality maintained. Therefore, it is important to have a monitoring in the production of raw materials for identifying and solving problems that compromise the microbiological quality of the final product. Even with technological advances, the by-products of animal origin are still prone to bacterial contamination, especially by micro-organisms *Escherichia coli*, *Salmonella* spp. and *Clostridium* sp. These groups of bacteria to colonize the intestinal tract of birds and when promote imbalance, affect directly, resulting in lower absorption of nutrients and, consequently, less weight gain and poorer feed conversion. In addition, represent a serious risk to public health, since it potentially pathogenic strains can be transmitted to humans through the consumption of meat and/or contaminated eggs. The aim of this study to evaluate the contamination of meal of animal origin by *Clostridium* sp., *E. coli* and *Salmonella spp*.. 166 samples were analyzed, being 89 of FC, FV and 37 of 40 FP, marketed in the States of Pernambuco, Paraiba and Bahia. All analyses were carried out in accordance with the provisions of normative instruction No 62/2003 of the Ministry of agriculture, livestock and food supply (MAPA), which regulates the official analytical methods for microbiological analysis in the control of animal products and water. Of the 107 samples analysed for *E. coli*, 41 (38.3%) samples were positive, however for *Salmonella* spp. were 2 (1.20%). And *Clostridium* sp. in 95 samples analysed, these 42 were MM, VF 25 and 28 FM, being observed counts above 500 cfu/g in 17 (40.48%) samples of MM, 21 (75.0%) FV and 13 (52.0%) FM. Because of economic losses to the poultry sector generated, detection of these bacteria in the animal flours analyzed, highlights the need for implementation of preventive measures and continuous oversight to a rigorous quality control microbiological. In addition, the possibility of contamination of carcasses and eggs by these microorganisms with pathogenic potential, represents a serious risk to public health.

Keywords: poultry farming, feed, Escherichia coli, Salmonella, Clostridium