

The saga of poultry salmonellas

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The paper I am going to present you now is not really a scientific presentation ; moreover , I must confess that most of the experiments described have not been realized following the rules of quality control used nowadays in laboratories ; however , I must say that what I have called « the saga of poultry salmonellas » was really a fascinating story .. during 20 years , in a laboratory situated in a very little town in Brittany , called Ploufragan , we have been tracking poultry salmonellas in order to know the origin of those pathogenic microorganisms which contaminated poultry further products .

Very early in my career , I have been fascinated by a sentence from Louis Pasteur written on the cover of the « Applied Microbiology » i.e « It is the characteristic of Science and Knowledge that it always opens new horizons » but I was far to imagine that one simple observation even at a very low scale, would be followed by so many new developments .

As I think I have been very lucky to live such an experience , it is really my pleasure to share with you one part of what I call « my life with salmonellas » . Of course , my presentation will concern only some elements , some facets of a long story ..

I- A request from the Ministry of Agriculture

Around 1965 , after the first developments of poultry industrial production , further poultry products like turkey roasts, escalopes ... , followed by turkey olives , mechanically deboned poultry meat .. appeared on the market .. The Ministry of Agriculture was very anxious about possible public health problems which may result for the consumer ; that is the reason why people in charge of regulations thought it was necessary to set up bacteriological standards for those new productions : the laboratory I was in charge of was requested to participate in that elaboration .

II- First investigations

At that time , we had never been involved in pathogenic microorganisms ; we were studying the possibility for industrials to improve the shelflife of their products , so we were concerned especially by psychrotrophic microorganisms .. Happily , we had a good contact with industrials, due to our frequent visits , which was supposed to facilitate our work ..

Of course, the standards we had to set up requested to focus our attention on those bacteria which are usually included in the standards and here begins **the saga of salmonellas** ..

We decided to examine the microbiological quality of further processed turkey products originating from different industries of the area , telling the industrials that our studies were realized **for research and not for control** .

And so we looked for total flora , *E. coli* , *Staphylococcus aureus* , *Clostridium perfringens* and *Salmonella* . From the first 140 turkey roasts analysed , 16 were contaminated with *Salmonella* . Later on, in other investigations, salmonellas were found from 18 roasts out of 35, 11 escalopes out of 15, and in 31 out of 35 pieces of meat used for turkey olives .. We were very much concerned by that discovery as, usually repressive measures should have been taken against the producers ... How to do ???

I decided to present the problem to the director of the Central Food Hygiene Laboratory in Paris ; his immediate answer was : give me the name of those industries and we will close them immediately ! I answered : NEVER .. I think the best is to try to find the origin of those salmonellas and we shall do so ..

Another anecdote with Pr BUTTIAUX from the Pasteur Institute in Lille : in a meeting concerning food *Salmonella* contamination , he told me too : those industries in which you find contaminated poultry have to be closed .. I answered : but , Professor , in those conditions , all industries must be closed ! I still hear his strong voice : « Listen , it is the voice of the youth and the truth » !!!!