

Monitoring for Salmonella at PIC Deutschland

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In Germany August 2000 a first draft on reducing the salmonella prevalence in slaughter pigs was made. As reaction PIC Deutschland expanded their health monitoring by testing for salmonella on nucleus and multiplier farms.

PIC Deutschland wanted to push and prove with the implementation of the PIC salmonella monitoring program the importance of starting at the highest level in the breeding pyramid. Reduction of the salmonella prevalence in the final product by implementing the program in the top of the pork chain in the nucleus and multiplier farms and then follow the program in the weaner producers and fattening farms.

Our goal was explained by the picture of the breeding pyramid with the nucleus and multiplier farms on the top, with the information how and why to do special measures.



When PIC was founded in 1962 a strict health program immediately became part of its fundamentals. The high health statuses of the PIC nucleus and multiplier farms were very important and how to safe, control and keep this.

It is our goal to produce and deliver pigs with high health and a high production capacity to prevent destroying the clients trust (Dr. Tom Alexander). To assure this high health status even more, the intensive and strict extra Salmonella monitor program of the selected gilts was implemented to be able to react quickly when needed.

Monthly 10 samples of the oldest gilts or boars of 98 grow outs were tested for salmonella with ELISA at the Bakum Field Station for Epidemiology. 2 regional vets of PIC were trained in controlling salmonella introduction in the herds, internal spreading of salmonella and improving the situation in the farms to increase immunity and to stabilize the health of the gastrointestinal tract.

The visits of the 2 PIC vets were done together with the herd vet and the PIC production team.

Of every farm-visit a report was made with specific points of action. The PIC vets supported the program especially in farms with higher serological titres or increasing titres on the basis of strict salmonella reduction protocols. A rolling index was calculated according to the Danish system with the average results of the last 3 months. 4 categories were used: Average of the 10 OD values is between 0 and 10% (71% of farms), 10-20% (17%), 20-40% (10%) or higher than 40% (2%). A check list was used to control nursery, pre-test and grow out units. With this list specific actions to reduce the salmonella titres were implemented. These actions were controlled by the herd vet and the PIC production team and always monitored by PIC vet-coordination.

One year later, strict control measures on salmonella reduction decreased the percentage of farms with the indexes above 20% from 12 to 7%.

Main actions were focussed on:

- reduce introduction like using a good isolation for the cool down period or strict rodent control
- reduce spreading on farm like strict hygiene control, all in all out, no mixing of pigs,
- stabilize health of the gastrointestinal tract like increasing the barley in the diet up to 50%, using acids in the feed or using meal feed.

2004 the German QS program (Quality and Safety) started. The experience of the PIC salmonella monitoring program became part of the salmonella program of QS. All datas were transformed to the QS salmonella monitoring. Now according to the QS regulations 10 blood samples are tested every 2 months (minimum 60 samples per year) with the Salmotype Pig Screen, LDL ELISA, OD>10% positive. In QS there are 3 categories: I = <20% positive samples over 1 year, II = 20-40% positive samples and III = >40% positive samples. The PIC farms started the QS with 64% in I, 26% in II and 10% in III.

The difference between the PIC salmonella monitoring and the QS monitoring is that with the QS the farmer got the categorization information one year after starting and then every quarter. In the PIC program there is a permanent monitoring and feedback and actions on increasing titres. Actions can start very quick which is very important for the safety of our products. The control of the salmonella situation in the PIC farms is now part of the regular visits of the PIC regional vets which are done every 3 months.

With the discussions regarding the salmonella monitor and reduction program in the EU the request for information from farmers, traders, slaughter houses and retail is going up. Especially information is requested on the good results of the program. In many presentations, publications and also in a dissertation the experiences and advises were presented.

The information on the PIC and the QS salmonella status is more and more asked for in the health status information regarding f.i. PRRS and Mycoplasma hyopneumoniae, the health monitor and vaccination program of gilts delivered. This information can be found in the health information if the "PIC vetinfothek", accessible by the web.

Making a resume, it can be said that the PIC salmonella program has been very successful. By the efforts and consequent cooperation of the multipliers and farmers of the grow-outs, the inspiring effort of the farm- and regional vets, who immediately reacted and implemented the actions for salmonella reduction and the production people, all our farms are now in category I. The salmonella monitor and reduction program of 2001 till present resulted in a lot of information, protocols and success stories.