Effet de la durée d'incorporation d'antioxydants végétaux dans un régime alimentaire riche en acides gras n-3 sur la peroxydation des lipides dans le tissu adipeux et les produits transformés de porc

Jacques MOUROT (1), Marisela ARTURO-SCHAAN (2, Martine FILLAUT (1), Gwenola ROBIN (1), Roland FORET(2)

(1) INRA, UMR 1079 SENAH, 35590 Saint Gilles, France

(2) Groupe CCPA, 35150 Janzé, France

Jacques.Mourot@rennes.inra.fr

Influence of plant antioxidant inclusion length in a pig diet supplemented with n-3 fatty acid on lipid peroxidation in pork and pork products.

The improvement in the nutritional quality of pork and pork products due to n-3 fatty acid (FA) incorporation in pig diets is an emerging strategy. Therefore, it is important to protect these fatty acids from peroxidation to preserve the sensory properties of these products. The addition of vitamin E to feed has already proven its value but also has some limitations. It is possible to extend the vitamin E action by adding plant antioxidants (PA) to the feed. The goal of this study was to investigate the effects of the length of time these PA are incorporated into a pig diet supplemented with n-3 fatty acids on the fat tissue composition and the preservation of these fatty acids in manufactured dry sausages. Over a period of 2 months, three groups of 8 pigs received the same diet enriched in n-3 FA. The control diet did not contain any PA in the feed. The second diet contained PA from the beginning through to the end of the study. In the last diet, PA was added to the feed 10 days before slaughter. Fatty acids were analysed on adipose tissue sampled at slaughter and on dry sausage manufactured from the meat of these animals. Lipoperoxidation potential (MDA) was measured in the dry sausages. The results showed that the n-3 FA percentage was higher for pigs receiving PA for 10 days pre-slaughter. Moreover, in the dry sausages the MDA was significantly lower in the PA supplemented groups compared to the control group ($p<0,01$).