5e Symposium du CRIP

Mercredi 16 mai & jeudi 17 mai 2012
à la Faculté de médecine vétérinaire
de Saint-Hyacinthe, Québec, Canada

Présentation par affiche (poster)

Reduction of *Salmonella* spp. excretion in pig fed different particles size of mash feed compared to pelleted feed

Philippe LeBel[1], Philippe Fravalo[1], Jessie Longpré[1], Benoit Laplante[2], **Ann Letellier[1,3]**

[1]CRSV-CRSNG, GRESA, Faculté de médecine vétérinaire, Université de Montréal; [2]F. Ménard inc.; [3]GREMIP, Faculté de médecine vétérinaire, Université de Montréal

In Canada foodborne diseases related to meat are estimated to cost an average of 1 billion dollar per year. *Salmonella* spp. being the mostly found zoonotic pathogen in pork, many countries proposed to control the bacteria as soon as the primary production by limiting the excretion by the pigs, particularly before their entry in the meat production chain. Many mitigation options studies described a moderate effect of feed additives, but the role of feed presentation has less been considered. Preliminary published results suggested that the use of mash feed instead of the traditional pelleted feed could reduce the *Salmonella* spp. seroprevalence. In this study we investigate whether and how mash vs pelleted feed has an impact on *Salmonella* excretion in feces and the incidence on the gastrointestinal tract health of pigs. To do so, 144 eight weeks old piglets originating from a *Salmonella* contaminated herd were assigned a specific diet of either mash or pelleted feed and an average particle size of 500, 750 or 1250 µm (6 groups of 24). Individual blood samples and feces were taken at the arrival at the farm (day 0), day 21, day 45 and a week before slaughter. After only 21 days of specific diet, *Salmonella* excretion of pigs assigned 500µm pelleted feed (commercial habits) was significantly higher (15/24) than for groups assigned 500 and 1250µm mash feed and 1250µm pelleted feed (1/24, 5/24 and 5/24 respectively). A lower *Salmonella* excretion ($P<0.05\%$) was also noticed for the total mash feed compared to pelleted feed assigned pigs at 21 days and a week before slaughter. These results demonstrated a strong effect of feed presentation on *Salmonella* fecal excretion. Mash presentation of the feed brings a preventive and/ or curative solution to *Salmonella* but should be put in the perspective of global intestinal health of pigs and economical analyses during production.