

Influence of a dynamic meal feeding approach on weaning performance and health of piglets*E. Royer¹, N. Lebas², M. Lapoujade² and R. Granier²**¹Ifip-institut du porc, 34 bd de la gare, Toulouse, France, ²Ifip-institut du porc, Rte de la Mathébie, Villefranche-de-Rouergue, France; eric.royer@ifip.asso.fr*

A total of 936 weaned piglets were used in three experiments to study the effects of a dynamic meal feeding at weaning. Piglets were affected by post-weaning colibacillosis and edema disease (ED) of *Escherichia coli* O141:K85 in Exp. 1 and 2, whereas this infection was controlled in Exp.3. In Exp.1 and Exp.2, a phase 1 diet was offered *ad libitum* with free access to hoppers (control), or given in long troughs seven times daily from 08:00 am to 7:30 pm in quantities adjusted each day to appetite (7M), or restricted (R-7M). In Exp.3, the treatments were (1) control, (2) eleven meals in troughs from 07:00 am to 10:30 pm with quantities adjusted after each meal to appetite (11M), and (3) 11M with a mixing strategy at weaning limiting the number of litters per pen (11M-FAM). The dynamic phase duration was 13, 9 and 10 d in Exp. 1, 2 and 3, respectively, after which, using only hoppers, all piglets received *ad libitum* the phase 1 diet to d 14. In Exp.1, a too restrictive adjustment of feed supply from d0 to 14 resulted in lower ADFI for 7M or R-7M pigs than for control pigs (305, 294 and 349 g/d, respectively; $P < 0.001$). However, ED outbreaks did not differ between treatments (mean=3% of piglets). In Exp.2, ADFI was reduced for 7M pigs (-4%; $P > 0.05$) and for R-7M pigs (-8%; $P = 0.02$) compared to control pigs (279, 257 and 291 g/d, respectively), but was unaffected from d 9 to 14. ED outbreaks from d 12 to 15, resulted in an equal number of dead or sick pigs for 7M and R-7M treatments (7%), which was higher than for control (3%). In Exp.3, ADFI from d0 to 10 was similar for piglets offered 11M, 11M-FAM and control treatments (289, 270 and 283 g/d, respectively). Video monitoring showed that the number of animals with feeding intake by meal period was increased at d 1 for 11M and 11M-FAM piglets compared to control piglets (75, 81 and 67%, respectively; $P < 0.01$). By reproducing the behavior of suckling piglets, the distribution of meals in long troughs may briefly enhance the feed intake during the first two days after weaning. The study did not confirm that decreasing or distributing the feed intake may control the edema disease.