

Adaptation of pancreatic secretion at weaning in piglet

Effect of the duration of the post-weaning fasting period

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Weaning

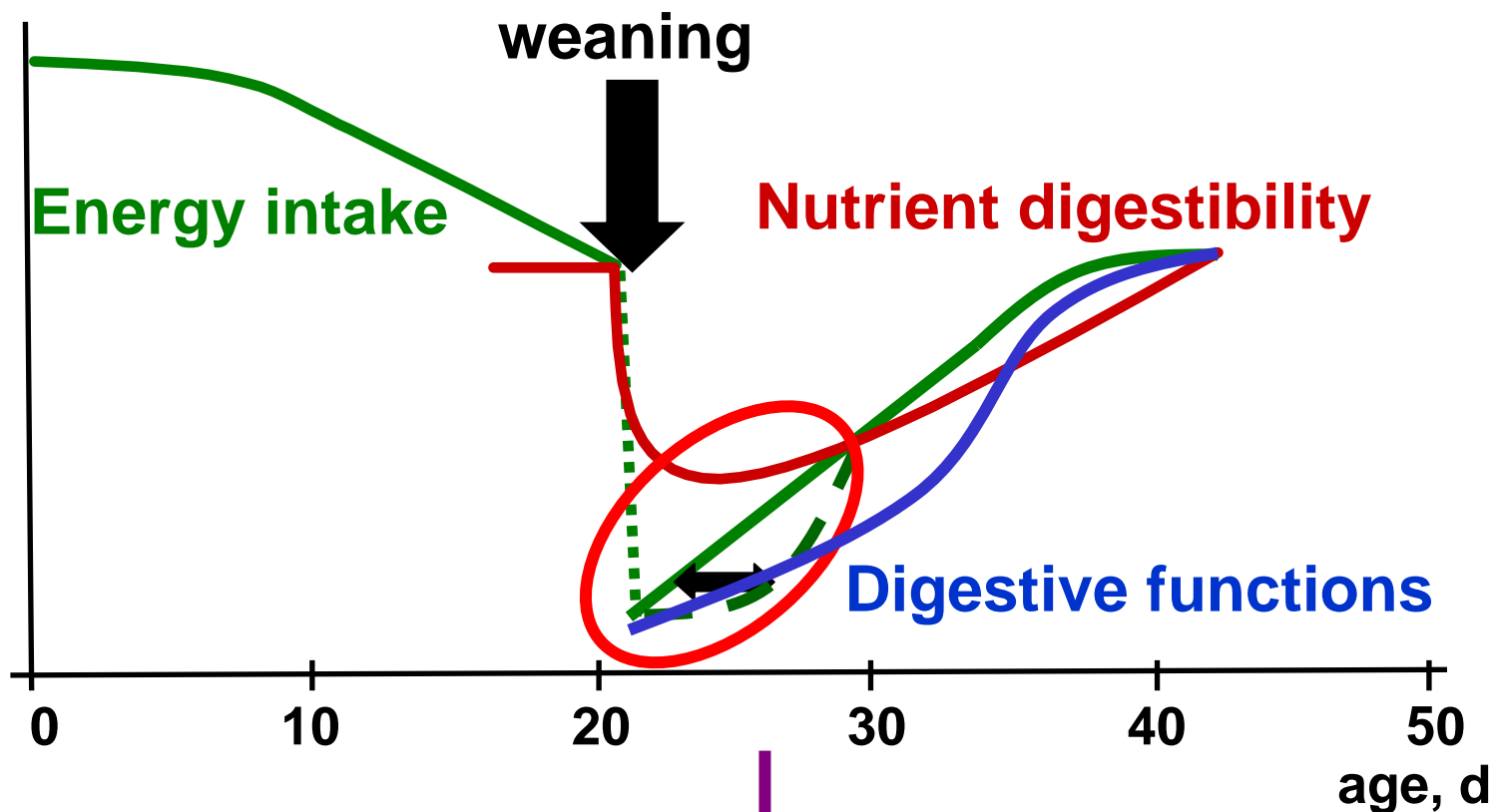
Decrease of growth performance

 **feed intake
digestibility**

 **Gut disorders**

Adaptation of digestive functions

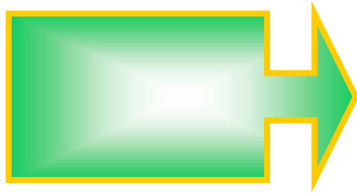
Main factor : dietary changes



Pancreatic secretion ?

Le Dividich and Sève, 2000

Objectives

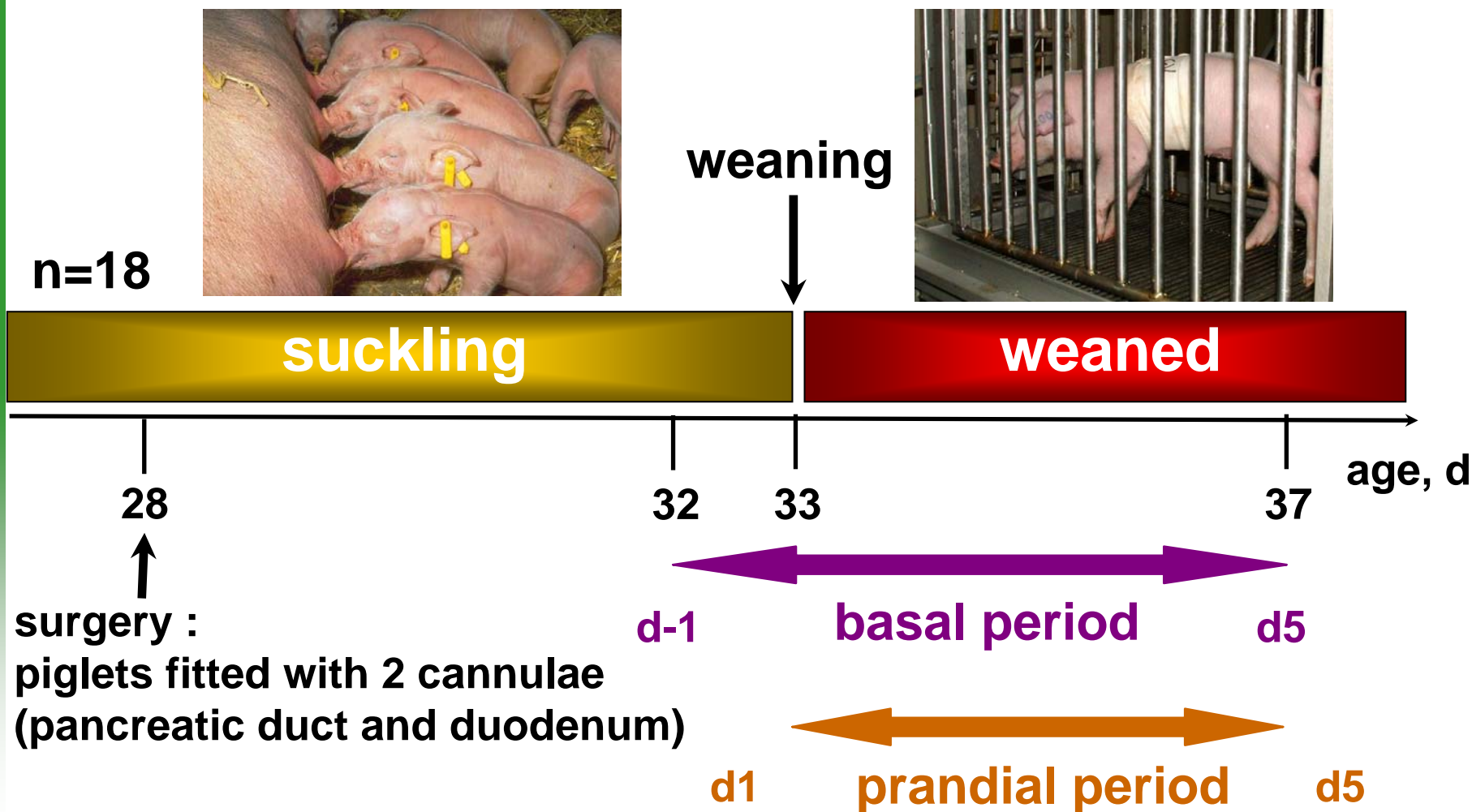


Adaptation of pancreatic secretion

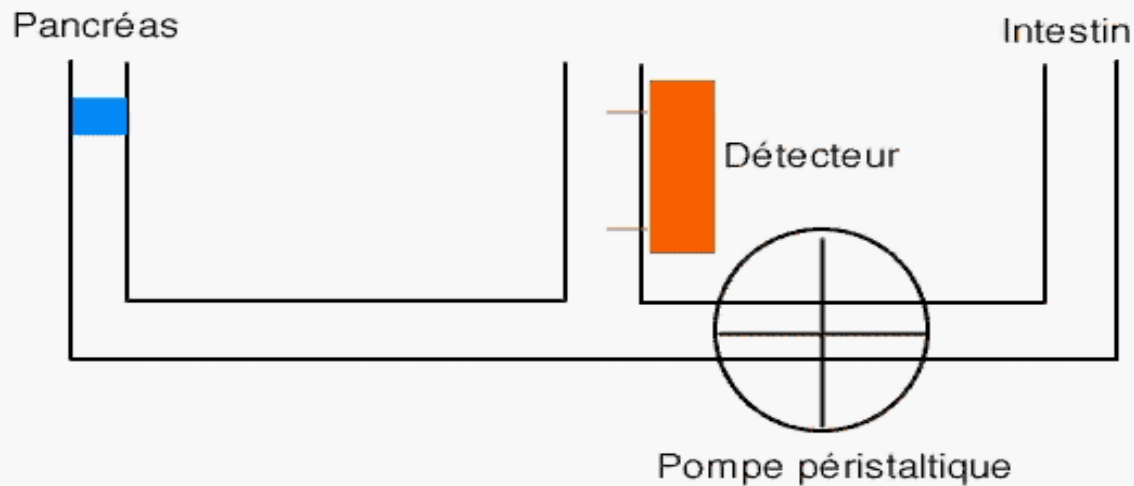


Effect of the duration of the post-weaning fasting period

Experimental protocol

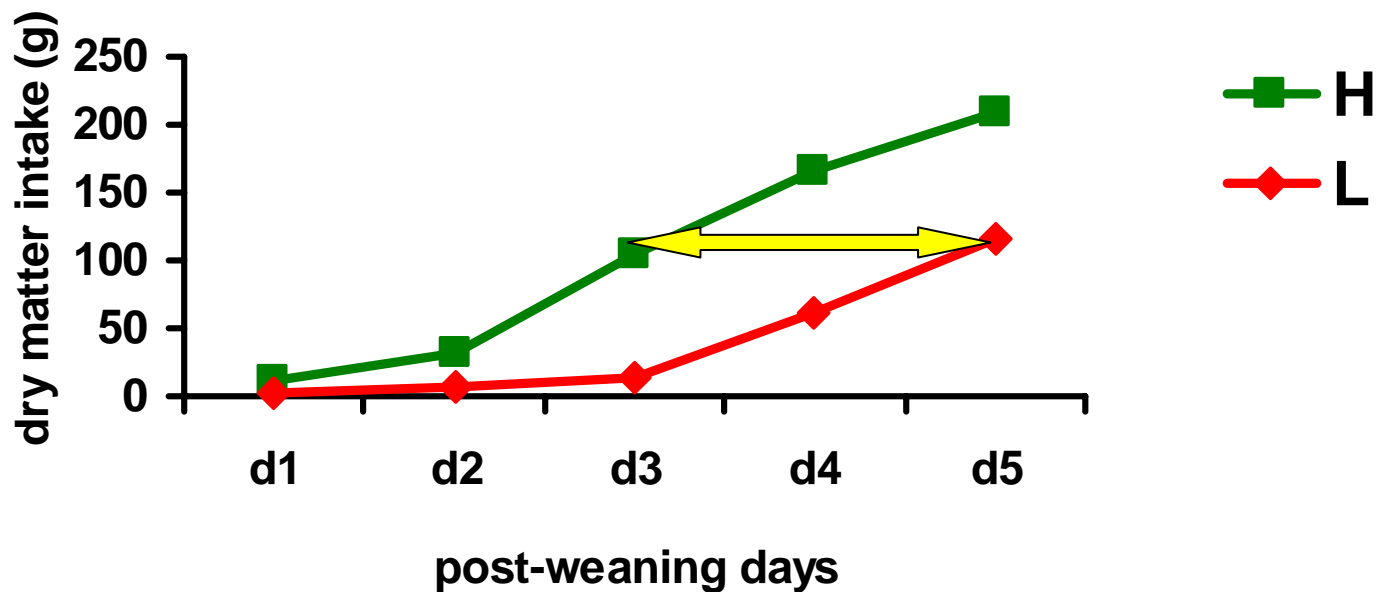


Juice collection



→ **sample
collection**

Feed intake level



Starter diet without additive

Statistical analysis

effects : **time**
 feed intake level
 time*feed intake level

Results

**Post-weaning adaptation of pancreatic secretion
(basal period)**

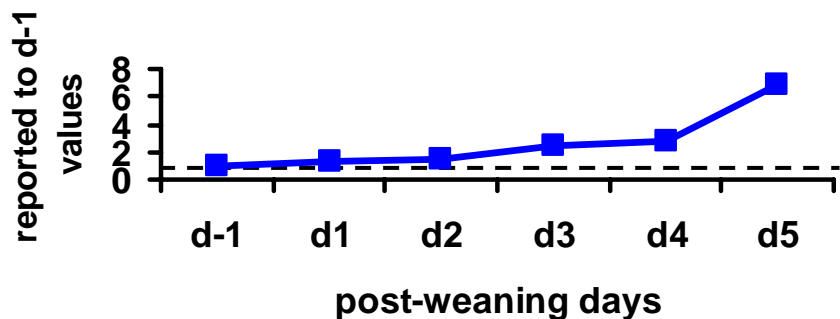
Effects of feed intake level

Post-weaning adaptation : basal period

Pancreatic flows

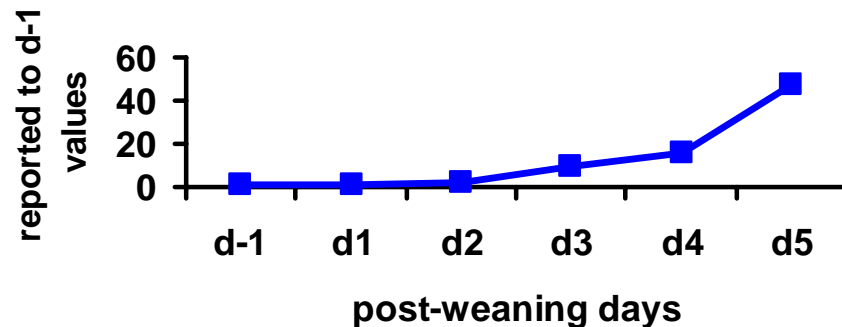
time effect $P=0,0005$

Protein



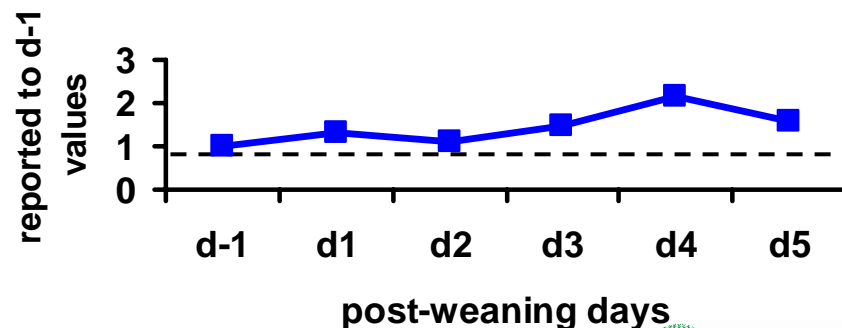
time effect $P=0,007$

Trypsin



time effect $P=0,008$

Lipase

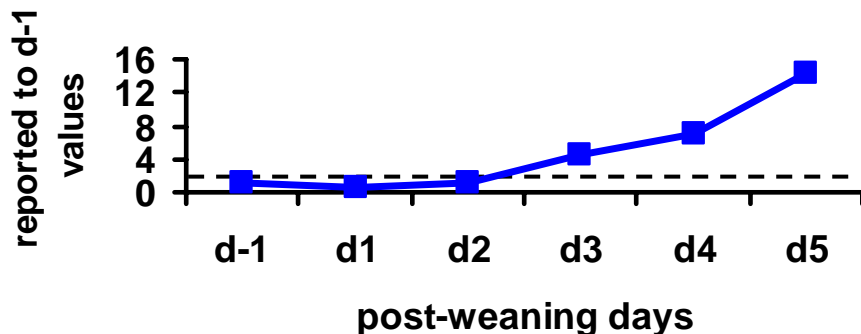


Post-weaning adaptation : basal period

Specific activities

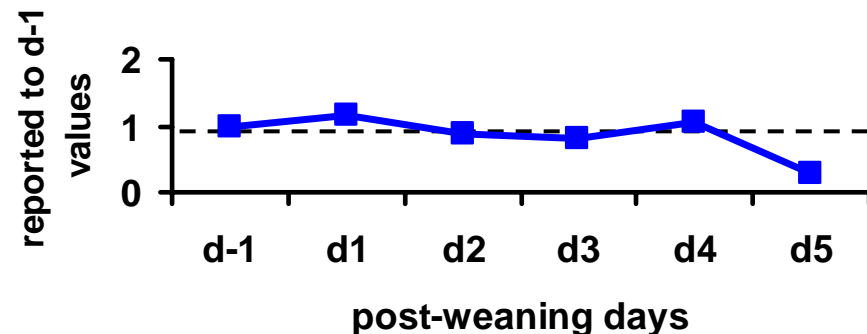
time effect $P=0,05$

Trypsin



time effect $P=0,006$

Lipase

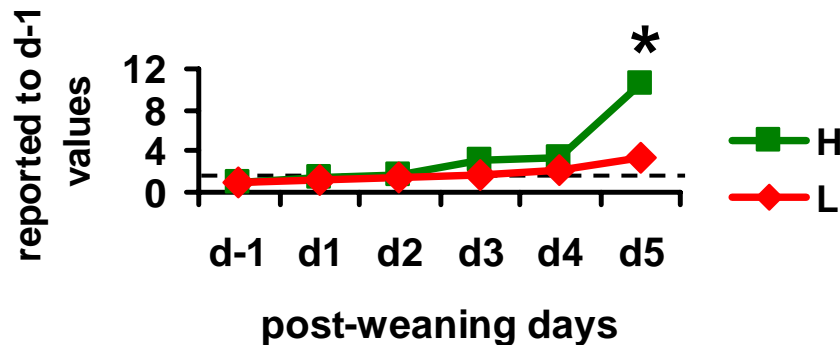


➡ Fast adaptation of pancreatic secretion

Effects of feed intake level : basal period

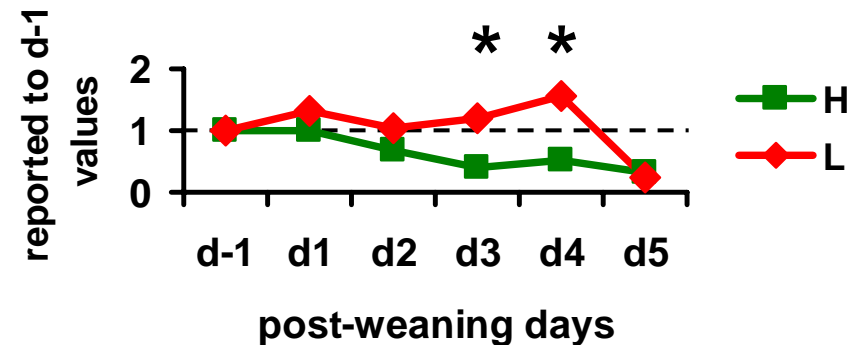
time*feed intake level $P=0,08$

Protein flow



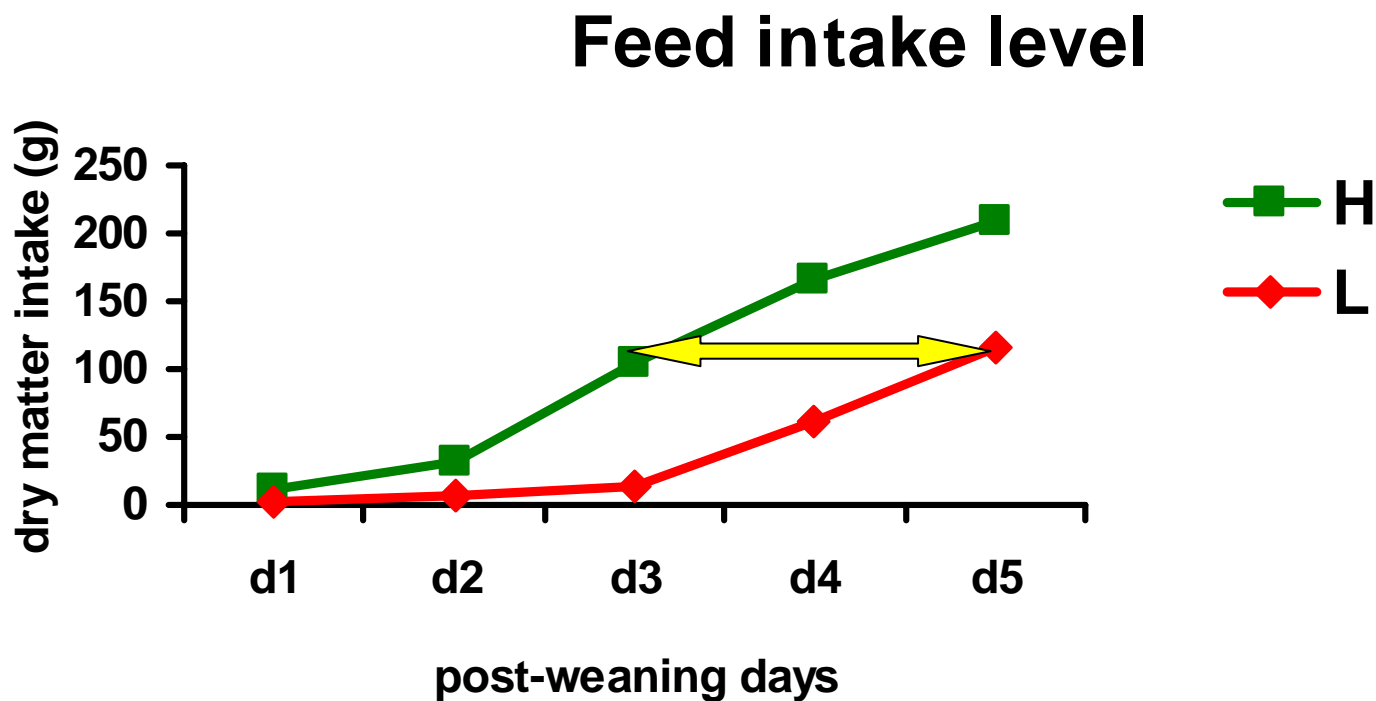
time*feed intake level $P=0,04$

Lipase specific activity



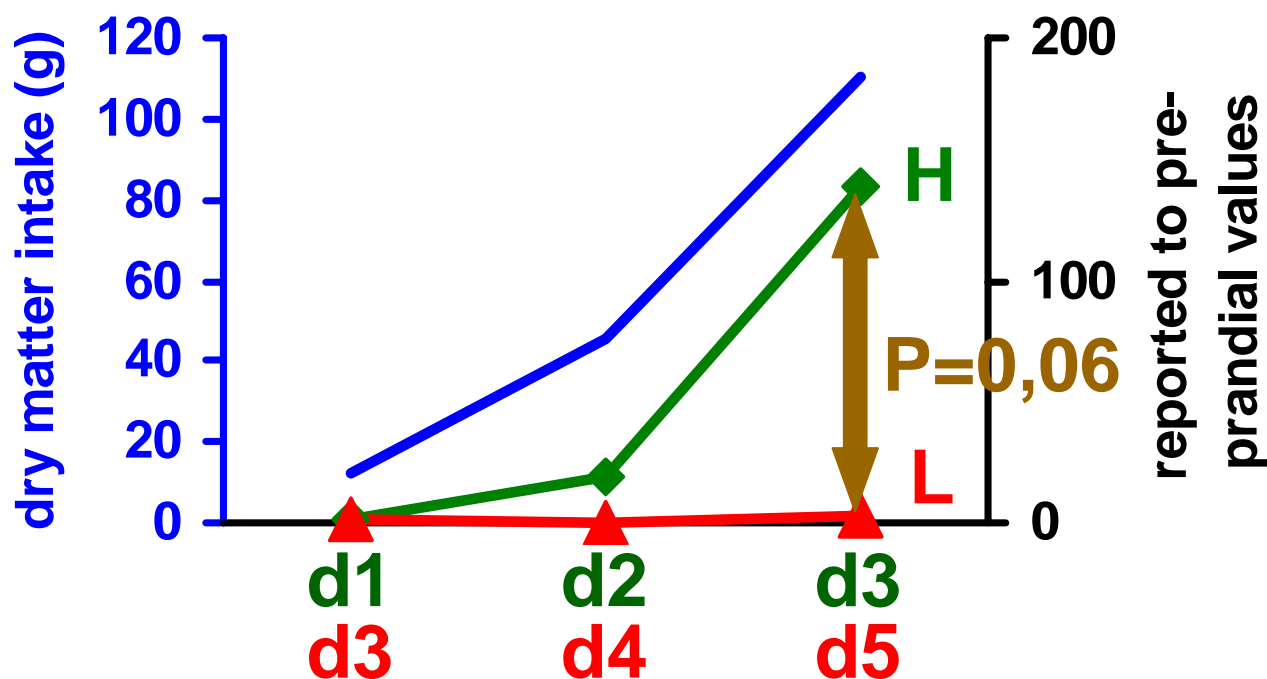
➔ Adaptation was delayed in piglets with low feed intake

Effects of feed intake level: prandial period



Effects of feed intake level : prandial period

Trypsin flow



➔ The longer fasting period affected the pancreatic response to the meal

Conclusions

Adaptation of pancreatic secretion

- ✓ Fast adaptation
- ✓ Effects enhanced in response to the meal

Feed intake level

- ✓ Delayed adaptation
- ✓ The long fasting period affected the pancreatic response

**Livestock production : necessity to
reduce the duration of the
post-weaning fasting period**