



## Dairy lipids, the fat navigator for lean growth

*Formulation of more concentrated feed is a prerequisite in current diet formulation. Fat provides more energy and creates 'free space' in the formula to include also more proteins, indispensable for muscular growth. This strategy becomes even more efficient by innovative products, like Volamel Compass, supporting the 'fat housekeeping process' in a more holistic way.*

At weaning, piglets have to deal with several stress-factors (e.g., separation from the mother, rearrangement of groups, (abrupt) shift from liquid to solid feed). Stress inevitably has an impact on small intestinal morphology and functionality, and even on fat housekeeping physiology. As retail and consum-

ers are more and more steering the do's and don'ts in the pig sector, antibiotics and zinc oxide are less accepted as a 'buoy' to keep piglet growth in pace after weaning. Volamel Compass is a different and sustainable approach to deal with these contemporary challenges.

### Volamel Compass, the fat navigator

The innovation is in the MFGM (fig 1), representing a unique and valuable lipid-containing component of cow's milk for young animal feed. The functionality of this complex membranous structure is versatile and clearly different from the classic cellular membrane. By supplementing Volamel Compass fat digestion/absorption is still supported, but the focus shifts towards fat metabolism. The ultimate goal is lean (and healthy) growth.



### Dynamic versus static energy

MFGM-supplementation, early in mammalian life, induces metabolic modifications with beneficial consequences on fat physiology later in life (defined as 'metabolic programming'). Once fat has been absorbed and assimilated into chylo- (mammals) or portomicrons (avians), the neonate can evacuate this fat towards different pathways: (1) 'inert' fat storage, (2) 'dynamic'

fat 'consumption', for maintenance or protein assimilation. In every animal, both pathways are present in a certain equilibrium (fig 2). The Fat Navigator shifts the balance between both main pathways, towards the 'dynamic' consumption of the fat, favoring muscular growth.

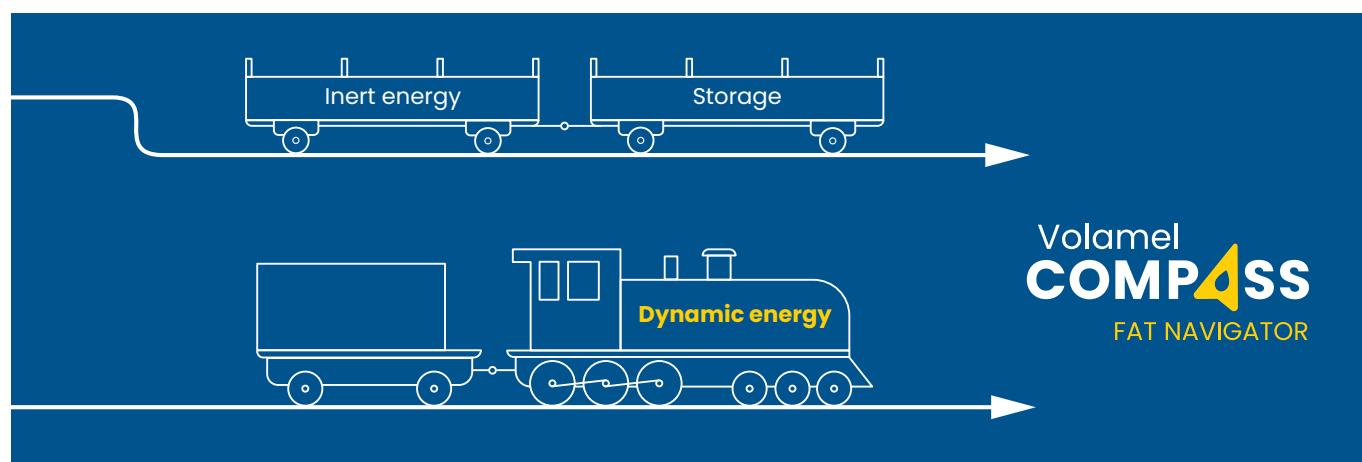
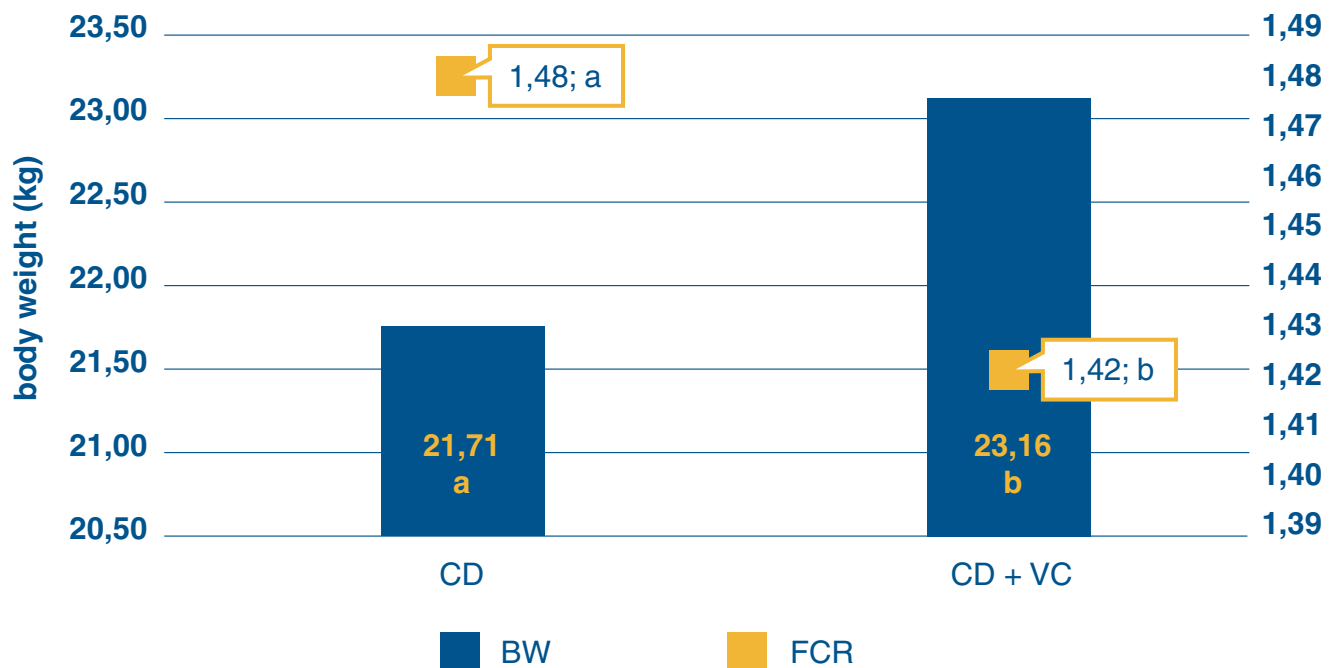


Figure 2: Volamel Compass converts dietary fat into dynamic energy



## The challenge of piglets, around weaning

Stress related to weaning compromises the intestinal functional capacity for digestion, absorption, and metabolism of dietary lipids. While digestibility of sow's milk fat is over 90% in suckling piglets, the digestibility of fat from solid feed in newly weaned piglets decreases between 65-80%.



(Fig 3): Effect of Volamel Compass on piglet growth performance (at 10 WOA; significant differences ( $P < 0,05$ ) indicated by different letters)

At Innsolpig, 256 piglets were randomly assigned to one of both treatment groups (8 pens with 16 piglets). Weaning was at 3 weeks of age (WOA). Piglets were fed a weaner mash diet (2 weeks), followed by a starter mash diet (5 weeks). The first group was fed the control diet (CD). The second group was supplemented with 500 ppm Volamel Compass 'on top' (CD + VC). The diets were barley-wheat-soy-based containing soybean oil and/or poultry fat. The supplemented piglets showed a significantly higher body weight ( $p < 0,05$ ), and a significant reduction in feed conversion rate (FCR; figure 3),

turning into a return on investment (ROI) of 6. Uniformity of the treatment group was higher (94% versus 90%). From this trial it can be concluded that the fat navigator clearly supports fat metabolism in this stressful period. Consequently, we can state that navigating the dietary fat more towards 'dynamic energy', really makes sense and results in clear economic benefit. The fat navigator not only results in a better performance, but also delivers better piglets from a meat quality perspective. Weaning consistently heavier and more uniform piglets makes all stakeholders happy.