

Use case: Predict the long-term effects of marginal changes in diet digestibility on bream production performance

This use case illustrates how FEEDNETICS™ can be used to complement trials that test, for example, the effects of digestibility enhancers such as lipid emulsifiers, phytogenetic additives, gut health promoters and feed enzymes. Due to the particularity of such trials, where most rearing conditions are controlled to be within optimal levels, and the fact that the effects of improved digestibility are not non-linear over the long-term, translating the better performance induced by digestibility enhancers to the commercial scale cannot be simply done by linear upscaling. In this regard, the use of nutrient-based models, such as FEEDNETICS™, may be useful in allowing to extrapolate the long-term impact of digestibility enhancers on commercial-scale settings. This use case was set up considering an additive inclusion at low level (0.2%), with minor revisions to feed formulations in order to maintain feed price. The main differences considered in the diet with the additive, compared to the baseline, were a marginal increase of approximately 1.5% in the apparent digestibility of crude protein, crude lipids and gross energy. The production conditions followed typical seabream cage production settings, reared in warm conditions at Madeira Island in Portugal. The main results are presented in the figure below.

