Feed-a-Gene

Adapting the feed, the animal and the feeding techniques to improve the efficiency and sustainability of monogastric livestock production systems

WP3: Modelling biological functions with emphasis on feed use mechanisms

FeedUtiliGene: Poultry Model

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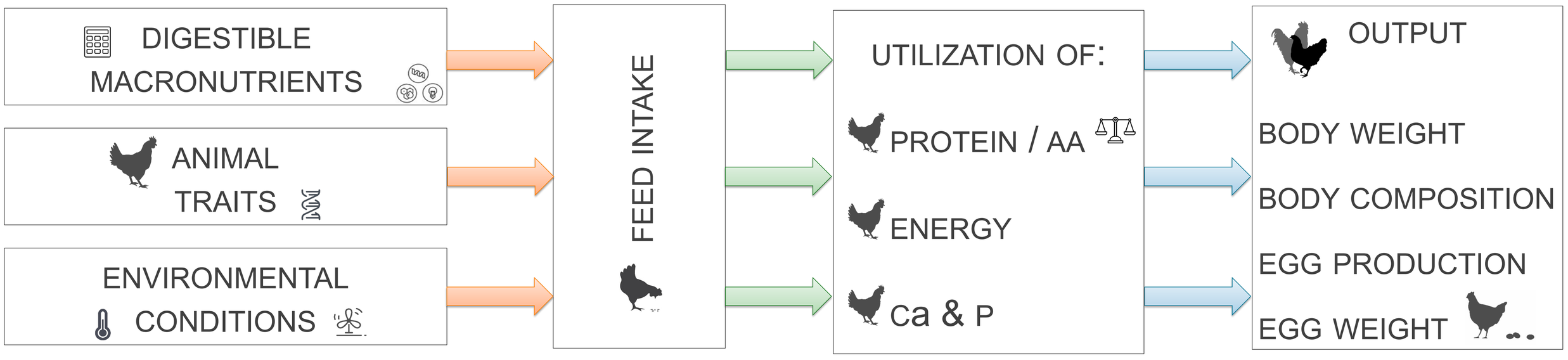
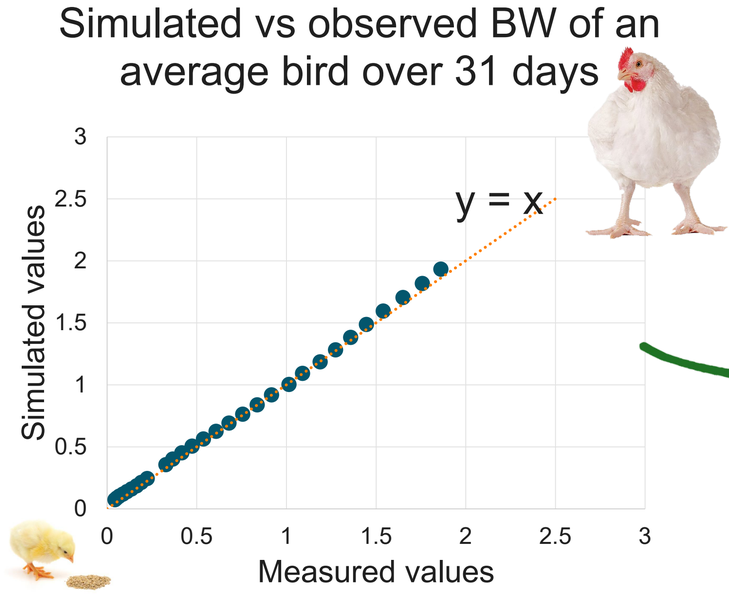
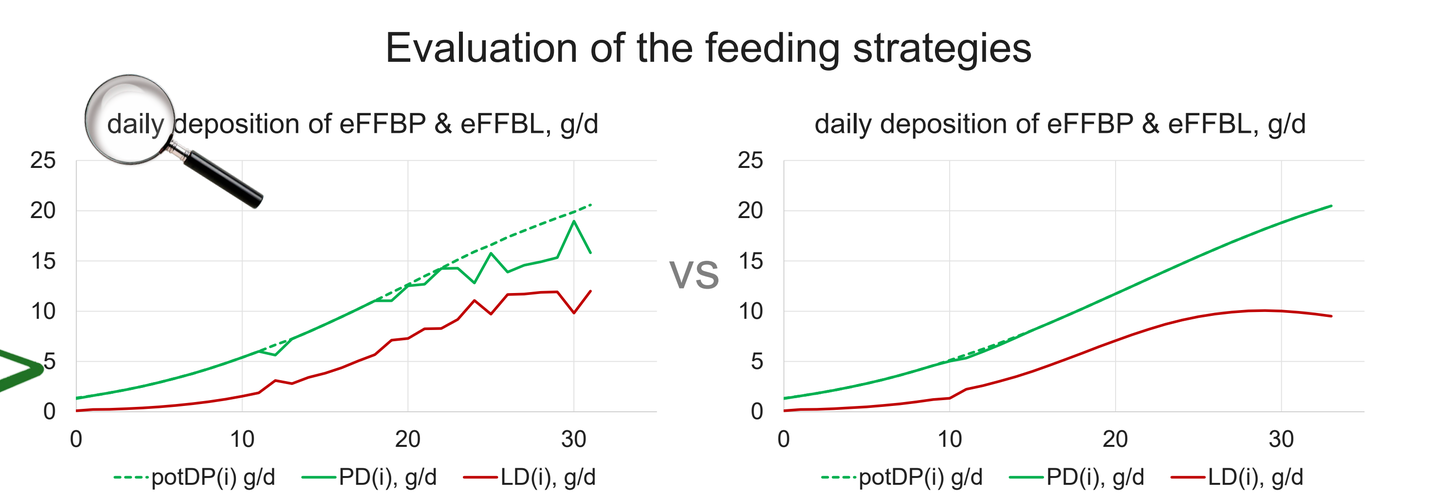
Modelling of digestible nutrient utilization is mainly based on concepts used in net energy and ideal protein systems

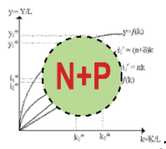
Feed Intake (FI) prediction as multiples of maintenance function based on BW can be used to estimate precisely the FI pattern of broilers during growth

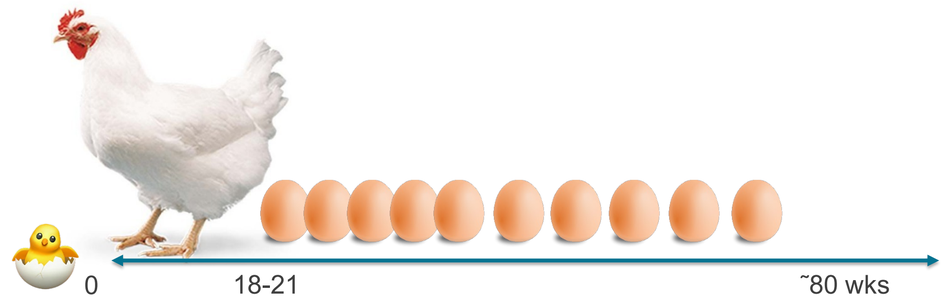
The developed model works for broilers and it has an egg production module as well

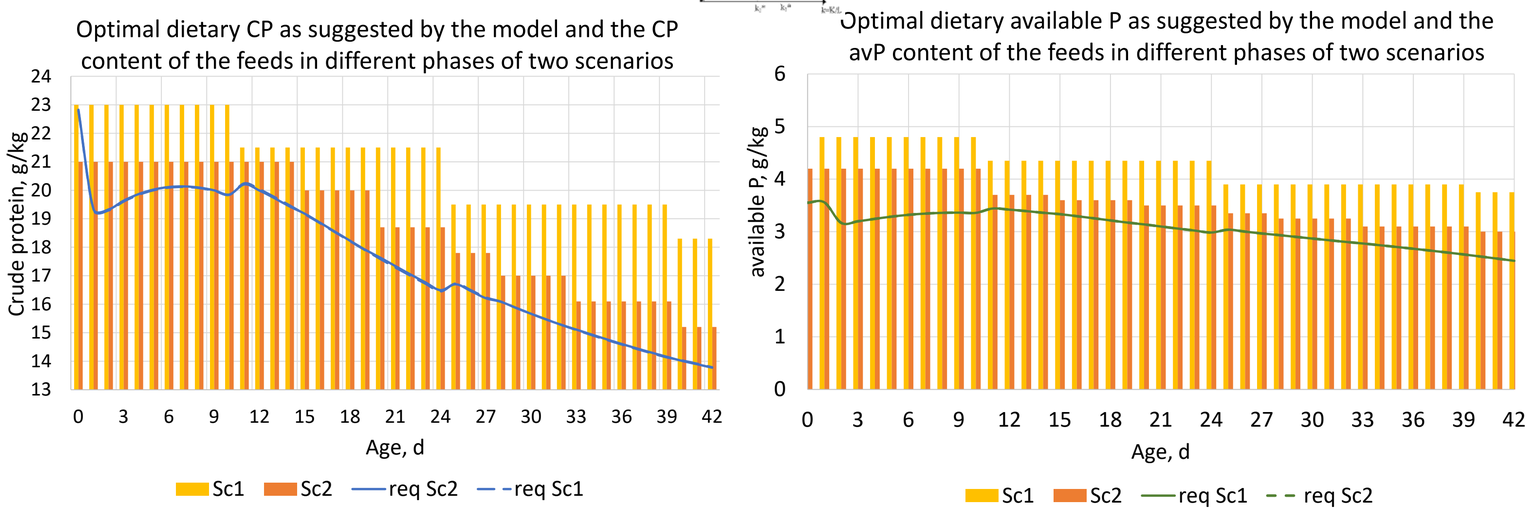


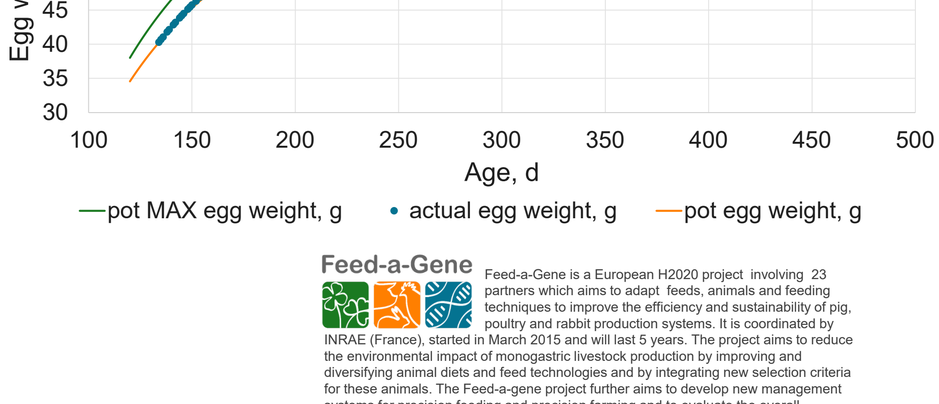


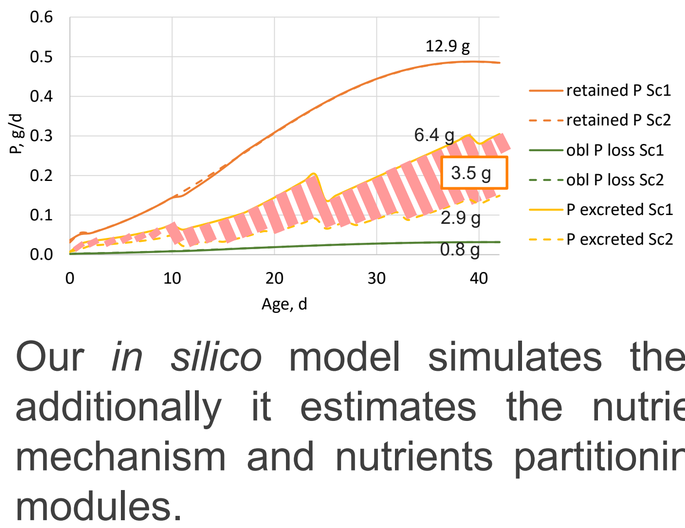


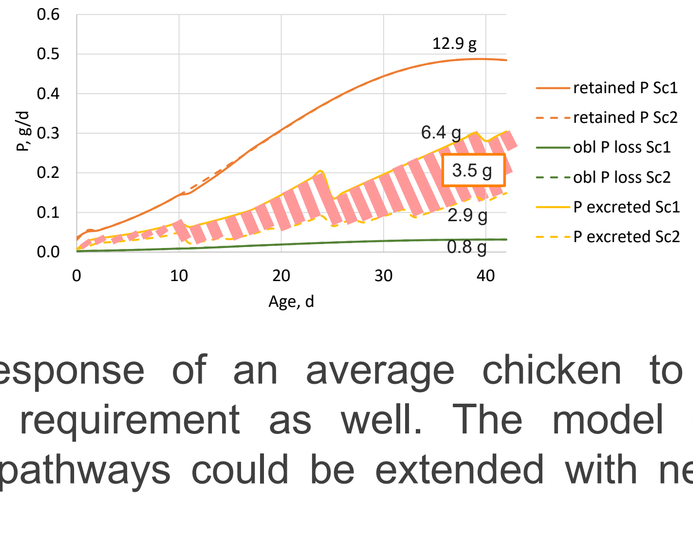












Our *in silico* model simulates the response of an average chicken to a certain diet, additionally it estimates the nutrient requirement as well. The model core, feed use mechanism and nutrients partitioning pathways could be extended with new equations or modules.

Feed-a-Gene

Feed-a-Gene is a European H2020 project involving 23 partners which aims to adapt feeds, animals and feeding techniques to improve the efficiency and sustainability of pig, poultry and rabbit production systems. It is coordinated by INRAE (France), started in March 2015 and will last 5 years. The project aims to reduce the environmental impact of monogastric livestock production by improving and diversifying animal diets and feed technologies and by integrating new selection criteria for these animals. The Feed-a-gene project further aims to develop new management systems for precision feeding and precision farming and to evaluate the overall sustainability of the different management solutions proposed in the project.

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