

CIEL Feed and Nutrition Open Innovation Group

Tuesday 15th February 2022 - Meeting Notes

Ruminant group

1. Innovation not necessarily required regarding use of soy, C16's etc because products are available, and diets can be formulated. More focus needed on economics of replacing these things in the ration.
2. A "what if" calculator would be a very useful tool for feed experts and for farmers i.e. what would be the effect of a dietary change on fertility, yield, emissions, efficiency, etc. So, we can assess performance in target metrics on a particular farm or to see what the biggest block is? Where are the big or easy wins? Herd/flock modelling, including interactions between animals & feed production.
 - a. Some calculators already available or currently in development e.g. Envirobench – allows farmers to input data and calculate efficiency. Dairy carbon calculator (system based) available in NI, similar being developed for beef. Food Futures links up calculators to facilitate farm benchmarking and reduce negative environmental impacts.
 - b. Standardisation of metric is current project involving AIC, AHDB, NFU
 - c. Need to consider usability of models in day-to-day usage
 - d. **Lots of calculators available doing various different jobs, should we look if the tools can be combined to make a better model/tool? Modelling efficient use of resources – where are the gaps. Where can the biggest gains be made?**
3. **Circularity of systems**
 - a. e.g. Nitrogen use – it is not simply an output, but comes back as input to farm. Protein utilization is important parameter.
 - b. **Shouldn't just focus on methane at the cost of efficiency. *May be better to focus on efficiency and ensure we quantify emissions. But must remember public perception surrounding reducing emissions. Consider resource efficiency.***
 - c. Consider repurposing of waste materials (co-products). How can we use waste within farm or from outside farm effectively? Are we considering all resources that are available? Valorisation of waste is being researched academically. Challenge of wet weight material & transportation. Need food factories on board for success.
4. Need to focus on commercial solutions not just pure academic research to reach net zero.

Monogastric group

1. Need clarity on where we are now as an industry, what are aiming for, what we need to achieve.
2. Industry priorities: innovation must be sellable, have a ROI, safe and must look at whole system.
3. Need to be able to compare data from different studies.
4. Need info from retailers will they accept insects in poultry feed, some won't
5. Need to be mindful of regulatory processes
6. Need to improve data on pigs during the finishing stage.
7. Gene editing may offer some opportunities.
8. Contradictions between welfare and net zero as the trend for slower growing birds will increase.
9. Former foods very important for pigs provided it can be handled and if to be pelleted isn't too moist.

Circular economy. Issues with scalability, quantity' and quality.

10. Transportation and handling of feed especially former foods.
11. Need to focus on main ingredients and how to get the most from them and how animal tolerate new raw materials.
12. Can we use less soya/soya alternative but balance amino acids with synthetic amino acids? Soya is tainted (political) but 70% currently coming from America so no LUC need to find alternatives.
13. What is the end goal, higher welfare, slower growing birds, lower emissions phosphorus and ammonia?