

## New era of real-time inline formula adjustment during batching

**Agentis Innovations has developed a solution that not only measures in real time the moisture of the raw material before batching, but auto corrects the batching weight to correct for the true dry matter.**

Moisture is an important diluent of the nutrients that comprise animal feed. Knowledge of the moisture content is essential for calculating nutrient density as well as its impact on operational efficiency and associated economic losses, said Yiannis Christodoulou, President of Agentis Innovations.

"Certain feeds constantly change in moisture content and these changes lead to financial losses if no adjustment is made for moisture gains or losses. Though a serious issue, the industry up until now has failed to be able to effectively solve the challenge of moisture loss."

Agentis Innovations is committed to providing solutions for the industry through the use of supervisory



**Yiannis Christodoulou**

control & data acquisition (SCADA) technology to assist the industry towards its efforts to become more efficient and therefore more cost effective, productive and customer-centric.

### Challenge

Nutritional quality requires formulating on a standard moisture basis and therefore each formulator will use a matrix value for the moisture of each ingredient on which the nutrient density of the feed will be determined.

It is common for many formulators to issue formulations on a fortnight or monthly basis. While this may be acceptable in terms of the nutritional variation of the raw materials, it is



**Agentis' supervisory control & data acquisition (SCADA) technology – M007 system applies real time control solutions for moisture loss at various stages of the milling process.**

clearly not appropriate in terms of moisture content.

Agentis has demonstrated through the use of its new in line moisture measurement technology, commercially known as the M007 system, that there is a significant variation in moisture of key ingredients in real time during batching.

The challenge therefore, is how the industry can respond in real time to maintain the correct nutrient density and prevent what is known as nutrient giveaway.

Nutrient giveaway will occur any time the moisture level of a specific raw material such as corn is lower than the level of moisture used by the formulator. The resulting batch that goes to the mixer will be higher in nutrient density and dry matter than formulated and a resulting stock loss will occur.

### Solution

"The auto weight correction for moisture is completed without any delay to the batching process and the PLC provides an adjusted formulation for verification, traceability and stock reconciliation purposes," said Mr Christodoulou.

"This represents a truly groundbreaking development for the feed industry because for the first time feed companies can not only accurately control the true dry matter entering the mixer but also reduce



## Otemchi sees growing potential for probiotics

Poultry farmers regularly treat their birds with antibiotics to prevent the development of intestinal infections. But, with the growing worry of consumers over the development of antibiotic-resistant bacteria, some farms want to abolish the use of antibiotics and introduce probiotics on their farms.

"Potential wise this is going to be the future but farmers must be able to see two things – the costs effectiveness and the benefits. Can I sell my chicken at a higher price?" asked Dr Chia Tet Fatt, Director of Otemchi Biotechnologies.

He told *Asian Feed Magazine* that Otemchi is already exporting its probiotics product Lactopac to three countries.

"We have selected the Lactobacilli strain from Malaysia and Singapore. The strains found in the tropics are more severe. This makes them more potent. We isolate, purify and test the strain," he explained, adding that Lactobacillus is naturally found throughout the world in plants, soil, animals, water and air.

Otemchi hopes to ramp up its production to 200 tonnes/month from the current 20 tonnes/month after its new production plant in Malaysia's southern state of Johor opens mid-2015.

Dr Chia said with economies of scale, the price of Lactopac probiotics will come down.

"Removing antibiotics from animal feed is imminent. Even now the price is feasible if farmers sell their birds

at a premium of 20-30%. Lactopac will not be as cheap as antibiotics but it will be feasible for farmers," he said.



**Dr Chia Tet Fatt**

Lactopac, sold in bags of 1kg, is given at an inclusion rate of less than 0.6%.

◁ stock variance through control of nutrient giveaway."

The Agentis Innovations inline feed formula adjustment technology has already been successfully installed at Betagro's Lopburi feedmill in Thailand where the two companies have worked together on the feed optimisation solution.

Korakot Thiwongkum, Kaizen Manager Betagro feedmill technology research and development said: "For a long time we have recognised the importance of moisture optimisation and the economic challenge of nutrient giveaway. Consistent with our approach for continual improvement we were delighted to be able to work with Agentis Innovations to install this truly innovative technology.

"The installation has enabled us to produce more accurate feeds in terms of nutrient density as well as control stock losses associated with nutrient giveaway," said Mr Khun Korakot. **AF**