

# Cereal alkalisation delivers multiple benefits

**The alkalisation of home-grown cereals is not only allowing dairy farmers in the Netherlands to cut their bought-in feed protein bill, it's also helping them to meet significant environmental challenges impacting on their milk production systems.**

Cereal alkalisation has already found favour with many UK dairy farmers as they seek ways of improving the nutritional value of home-grown feeds. Now interest is spreading around the world as other countries' agricultural sectors start to realise the multiple benefits delivered by the practice.

For example, Camiel Hoogland—managing director of Hoogland BV, which trades 80,000 tonnes of agricultural commodities a year in the Netherlands—says that cereal alkalisation is helping Dutch dairy farmers reduce reliance on bought-in soya and meet stringent new phosphate pollution restrictions. Mr Hoogland points out that many Dutch dairy units farm sandy soils that leach nutrients and this means potential contamination of drinking water supplies is a real risk.

## Phosphate limits

"EU regulations dictate that the animal production sector in the Netherlands must reduce its P205 output and our government responded in 2012 by setting maximum quotas. The dairy sector is responsible for about half the P205 output by the country's animal production industry, so the pressure on milk producers to reduce it is significant and meeting the target has been very challenging. Indeed, in 2015 and 2016 the dairy sector was still over-producing P205—by eight million and five million tonnes in these years respectively, so further action may become necessary."

Mr Hoogland says that if the



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Netherlands fails to meet the P205 output in 2017 it may even lose its EU derogation with respect to fertiliser nitrate applications.

"The EU has made a unique exception in the Netherlands case in allowing Dutch farmers to spread 250g of NO<sub>3</sub> per hectare instead of the usual 170g per hectare limit. However, the consequences of losing this derogation would be massive and in effect would mean the Dutch dairy industry losing 480,000 dairy cows—almost 30% of the national herd," he points out.

As a result, the Dutch dairy industry is taking a number of steps to reduce environmental pollutants, including using less phosphorus in animal feed, buying out dairy farmers without successors and limiting the number of cows that can be kept on farms

(based on a reference moment taken on July 2nd 2015). These steps should cut P205 output by about 8.2 million tonnes and if farmers do not comply they will face fines and be forced to remove dung surpluses at a cost of 15 euros

per tonne.

Against this background, Mr Hoogland believes cereal alkalisation could be a saviour for dairy farmers in the Netherlands.

## Cereal treatment

"Cereal alkalisation not only means less phosphorus is going into the diet, it also allows us to reduce soya inclusions. In trials, we've been able to save 1.377g of phosphorus per cow (equivalent to 3.1kg of phosphorus pentoxide) compared with feeding soya. This effectively allows a 180-cow milking herd the opportunity keep 14 to 15 extra cows on the farm, which is significant," he says.

Malcolm Graham from FiveF Alka is helping Hoogland BV advise its dairy farmer clients on the benefits of alkalisation and the versatility of the process.

"Alkalisation technology is both powerful and ridiculously simple," he says. "We are also finding it increasingly flexible in terms of helping different countries meet various nutritional, financial and environmental challenges fac-

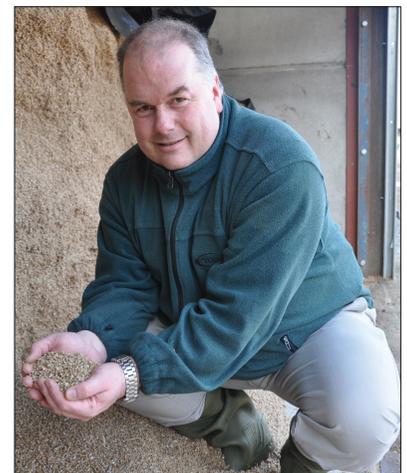
ing their ruminant livestock industries

"Working with distribution partners, such as Hoogland BV, has highlighted just one of the additional application opportunities—but alkalisation is essentially a tool that allows dairy producers, in particular, to improve the nutrient utilisation of home-grown grain and other acid-loading feeds and diets. And now we have the capability to offer alkaline feeding solutions worldwide for almost any livestock feeding system."

## Benefits to UK farmers

Mr Graham added that many UK dairy farmers could boost their use of highly cost-effective home-grown cereals in cow diets by as much as 40%.

"Many farm users of our alkalising technology are now feeding 20% to 40% more of their home-grown feed materials, cutting feed costs while also increasing milk output and improving longer-term profit factors such as cow energy status and fertility," he says.



*Malcolm Graham from FiveF Alka says home-grown cereal alkalisation is both powerful and ridiculously simple, and offers farmers a whole host of value-added benefits.*



*Camiel Hoogland from Hoogland BV believes cereal alkalisation could be a saviour for dairy farmers in Holland.*