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## Soil health can revolutionise farm profitability

Jo Scamell, from Ground Level Nutrition Ltd, had some practical and thought provoking advice for UK dairy farmers at the recent OMSCo Positive Dairying conference held in Birmingham.

The conference aimed to look at opportunities for the UK dairy industry and offer some practical advice on where farmers could improve efficiencies and therefore increasing farm profitability.

“There are areas, in terms of soil health, that farmers have not thought about and yet are easy to adopt to increase profitability,” says Jo. “We need to alter our thinking pattern so that we can enhance the resources on farm and maximise efficiency.

“We need to think of leys and swards in terms of volume not area,” she explains. “We should look at soil as the key to efficient production, disease resistance, and the whole financial cycle of the farm.

“Newman Turner historically said that herbal leys incorporate the fertiliser merchant, feed merchant and the vet all in one. Basically we are getting the medicinal benefits and getting the nutrient profile benefit from a herbal ley,” explains Jo. “Herbal leys exploit a wide range of rooting depths using differing plant species to offer a nutritionally balanced, drought tolerant and high production sward.

“My advice would be to use a mixture of clovers, speak to people who understand herbal leys and select the best for your soil type. Anyone struggling with dry matter production look at the figures; the use of three species or more on a herbal ley, can result in an increase of up to 50% dry matter production of that sward.

“Slurry is a whole resource not utilised to the greatest advantage on farms,” she claims. “Slurry treatment products have improved significantly over the last 10 years, and lead to practical benefits such as less stirring time, less blockages and savings on fuel and labour. Also, treated slurry will not suck the oxygen out of the soil, which in turn encourages earthworm activity leading to a healthier soil.

“Get a spade and dig,” she advises. “Have an affinity with your soil. Dig a hole in every field every month. Obviously take into account the weather conditions, but also look to see if you have surface



compaction, deep layer compaction, if you can get away without ploughing, and if you can use a minimal till. Think in a flexible way,” she adds.

“Ploughing is very destructive to soil microbes in the top layer, so avoid it if you can. You should also smell your soil. Think of it like silage. The cheapest soil test is smell.

“Soil needs to be a working living soil, not a dead soil. You should have 25 earthworms per cubic foot of soil. It’s a very visual test. You should have a population of different sized worms. Look at the colour and activity of the earthworms for an indication of how healthy they are.

“Make sure you have the correct balance of soil minerals. Calcium is the key to all production. You should also look at sulphur levels,” she advises. “Sulphate is needed to ensure nitrogen is being fixed into protein efficiently.”

Jo went on to add some interesting observations she has made on farms with relation to animal health. “I’m currently interested in looking at the TB resistance on farms relative to soil health,” she explains. “In my experience, I’ve noticed that farms with healthy soils have less TB incidence than farms with unhealthy soils.

“In summary, we need to exploit the beneficial relationships of our farm resources and we will find, financially, it will pay dividends,” she concludes. “Work on soil health can revolutionise the profitability of the farm.”

Wil Armitage, an OMSCO organic dairy farmer from Leicestershire added to Jo’s views with his practical thoughts on soil management on his farm. “The best farms around the world are managing their soils,” he says. “Looking at the base saturation levels in the soil should be the starting point for any farmer in the UK. Understanding this is fundamental for productivity.

“Dairy farmers have a massive opportunity to increase soil biology,” he adds. “We’ve so much to learn; we need to look more at plant diversity and understand the synergies between plants.

“There’s no doubt that the quality and integrity of the feed we produce on farm is as a result of our soil management. Biological farming is the future,” Wil concludes.

Videos of all the speakers at the OMSCO Positive Dairying conference are available on the OMSCO website. Click on the video tab to view. <http://www.omSCO.co.uk/videos>