MADE SMARTER

ENVIROSYSTEMS FINDING FERTILE GROUND FOR GROWTH

CASE STUDY

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For the past 23 years Preston-based EnviroSystems has expanded from a business innovating in animal nutrition to an industry leader in bedding and fertiliser concepts.

Its bio-tech product SlurryBugs is an additive for treating slurry that improves its quality and effectiveness as a fertiliser, reduces odours, and minimizes crusting which can otherwise make it hard to extract and use.

Over the last 15 years an increasing number of small and medium-sized farms have used the product, but EnviroSystems has struggled to penetrate the larger farms.

In recent years the business has taken manufacturing processes in-house and invested in research and development.

With 18 staff working across its Barton Cross Park HQ, Foggs Farm production plant and remotely, EnviroSystems is now exploring how the adoption of industrial digital technologies can help them to access that key market and reduce the environmental impact of farming emissions.

THE CHALLENGE

The slurry manure produced by cattle is important to farmers because its nutrient content helps to fertilise soil and therefore improve crop yield.

EnviroSystems’ SlurryBugs product – a micro-organism and enzyme-based inoculant – has been successful in treating small-to-medium sized slurry pits, tanks or lagoons because it can be manually applied without proving too labour and time intensive. However, this is only true up to a point, after which customers find the process too arduous and this has proved a barrier in selling the product to larger farms.

Dr Henry Russell, Operations Manager for EnviroSystems, who is a qualified biochemist and microbiologist, said this is the challenge they have taken on.

“Over the last 15 years the results we have seen are striking and we believe that SlurryBugs has huge potential,” he said. “It has been shown to improve the fertilizer value of slurry, thus reducing the need for chemical fertilizers and saving farm businesses money, and consistently reducing odour on-farm.

“The average sized herd of 150 cows is manageable using our product. But some farms have 2,000 cows, these are mega farms, and for them that treatment process is too laborious.

“For the big farms it’s not automated enough – and there is our opportunity.”

THE SOLUTION

EnviroSystems is exploring the development of an advanced automated dosing and sensing system for treatment of slurry stores.

It will harness smart technologies including sensors, big data, analytics and machine learning.

Henry explained:

> “The question we asked ourselves is why can’t we create a machine that mimics what the farmer would do, but also controls the dosing and services the unit if any issues emerge, be that remotely or in person.”

EnviroSystems has been working on the feasibility of the project through Innovate UK’s Innovate2Succeed programme. Now Made Smarter is supporting the company with technical expertise and match-funding.

THE BENEFITS

EnviroSystems forecast that by going to market with its ground-breaking solution the company’s revenues will grow by up to 20% per year over the next three years.

That level of growth will enable the firm to invest in more highly-skilled staff and further adopt digital technologies such as robotics to address increased productivity needs.

It is also expected to result in an increase in GVA by £785,625 over the next three years.

THE FUTURE

One of the major by-products of increased application of SlurryBugs and the Industry 4.0 dosing system is the environmental impact.

Henry explained: *“Air pollution is the major environmental concern in the UK and the agriculture sector – which accounts for 88% of all ammonia emissions, through the storage and spreading of manures, slurries and from using inorganic fertilisers – plays its part.*

“The Government’s Clean Air strategy wants to reduce ammonia levels by 8% by 2020 and 16% by 2030 and it is working with farmers on solutions which include funding new equipment.

“We passionately believe that EnviroSystems can play a big part in reducing emissions and aligns perfectly with the Clean Air Strategy. Our products are a good thing for farmers and the environment, both in terms of reducing emissions, and improving soil quality and crop quality.”

enviro systems