

Statistics software success for spinout company VSN international

Around 40,000 people are using statistical software packages GenStat and ASReml, developed and sold by spinout company VSN international (VSNi)¹.

VSNi was established to distribute GenStat in 2000 by Rothamsted Research², an institute that receives strategic funding from BBSRC, and technical software company Numerical Algorithms Group (NAG)³.

Some of the largest seed companies such as Dow Agrochemicals, Pioneer, and Monsanto use GenStat to help them design new crop varieties. As a result, much of VSNi's revenue comes from the USA and Europe, where the larger seed companies base their R&D activities. VSNi also has a strong customer base in Australia and New Zealand as both countries have strong agricultural economies.

“As a business, our revenues are growing at between 15- 20 per cent per annum now,” says VSNi Chief Executive Stewart Andrews.

As well as commercial users, VSNi provides 7000 active registered users in developing countries with access to a free-of-charge ‘Discovery Edition’ of the software. In particular, the company is working with The Bill and Melinda Gates Foundation to help build statistical capacity amongst African farmers by distributing GenStat, as improvements to crop quality and yields for farmers in these areas would make a significant impact



The long-term Broadbalk experiment at Rothamsted Research. Credit: Rothamsted Research

on household incomes and quality of life.

‘A powerful tool’

The first version of GenStat was developed by BBSRC scientists at Rothamsted in 1968, building on the world-leading applied statistics research at the institute. “The prototype of GenStat was developed internally to help us analyse the results from our long-term experi-

ments and other work on crop genetics. As our statistics group developed the software they realised it could be a powerful tool for everybody else,” says Professor Maurice Moloney, CE and Director of Rothamsted and a member of the board for VSNi.

GenStat is used for genetic analysis, mapping the genes that influence a particular trait (plant height, for instance) and helping researchers and plant breeders

identify individual markers or sequences in crop genomes. Plant breeders, including some of the world's largest seed companies, use these markers to breed varieties of crops with desirable traits. GenStat can also be used to examine the effects of different treatments applied to crops, as well as a range of other statistical analyses⁴.

ASReml was also developed at Rothamsted in collaboration with the Department of Primary Industry in New South Wales, Australia. It is designed to analyse and fit statistical models to large datasets⁵. ASReml is being used by crop breeders around the world.

Rothamsted began distributing GenStat to academic and industry researchers outside Rothamsted in the 1970s, and in 1979 NAG took responsibility for the commercial side of the business. In 2000, Rothamsted and NAG launched VSNi to continue to develop and sell GenStat, while maintaining strong links with both founder organisations. However, the company started slowly, and struggled to make a profit in the first few years.

Andrews managed to turn this around when he took over in 2003. He puts this down to a new financial structure which means that VSNi employees now own forty per cent of the company. "We see the business as effectively starting in 2003," says Andrews.

At the same time, Andrews focussed the company on its core market, the biosciences. "We focussed in on

what we did best, what we knew best, where our core customers resided and the network we had," Andrews explains.

New markets

The company is now looking to expand into emerging markets with a strong agricultural focus, including China, Vietnam, Thailand and Indonesia. "Our major new business focus is basically in a line from Beijing down to Jakarta. We're in the process of setting up our first subsidiary in Beijing," says Andrews. "It's only now that the national governments are realising they need to improve everything from making money out of agriculture to, more importantly, their own food security."

Notes and references

1. See: <http://www.vsn.co.uk/>
2. Rothamsted Research receives strategic funding from BBSRC and, before that, from BBSRC's predecessor AFRC. See: <http://www.rothamsted.ac.uk/>
3. See: <http://www.nag.co.uk/>
4. For a summary of GenStat functionality, see: <http://www.vsn.co.uk/software/genstat>
5. For a summary of ASReml functionality, see: <http://vsni.co.uk/software/asrem1>