



Introduction to three case studies of farmer-led research Professor David Leaver, Chairman RASE Practice with Science Group

The future of agriculture in the UK will be strongly influenced by its ability to grow in competitiveness. A continuous increase in the efficiency of agricultural production (productivity) will be needed to be competitive, and the main driver for this is innovation and its translation into new technology. The withdrawal of funding for applied agricultural research by the public sector over the last twenty five years¹ has put this growth in productivity at great risk, and in view of the economic constraints now being imposed by government there will have to be increasing reliance on the agricultural industry itself for this innovation and new technology development.

The farmer-led organisations in the following three case studies are outstanding examples of how the industry can move forward competitively. They are focused on the needs of the industry in their particular sectors, and on increasing the competitiveness of their individual members.

We now need to see from the industry, a greater involvement of farmers and levy bodies in these types of farmer-led R&D organisations, and from the public sector, we need to see research funding agencies working much more closely with these organisations to link practice with science and develop our much-needed competitive technologies for the future.

¹Leaver, D. (2010) Practice with Science and Agriculture: the need to re-invigorate this partnership. Royal Agricultural Society of England. Practice with Science, Extract 3: Applied Agricultural Research. Stoneleigh.

Kingshay – Independent near-market research for the commercial milk producer

Duncan Forbes²

Summary

Kingshay, as an independent dairy farmers' organisation, is committed to getting the findings of fundamental research into action on practical farms. They were pioneers of silage additives testing and other research includes grazing trials on clover varieties, the evaluation of slurry additives and the development of a farm carbon footprinting model. They run a dairy herd benchmarking programme with users throughout the UK as well as some in Europe and Canada. Kingshay's UK members receive twice-monthly management notes and monthly checklists and have access to on-farm advice, a health management programme, specialist soils advice and training workshops. Students can have on-line membership whilst they are at college and get special rates for the first two years after graduating. They have developed a special associate membership for veterinarians. There is frustration that limited resources mean that Kingshay services cannot be marketed more widely to gain a wider membership.

Getting the findings of fundamental research into action on practical farms is a challenge. Often researchers don't get funded sufficiently to put the message across and farmers don't have the time or inclination to read the academic research papers.

This was one of the driving forces behind Kingshay being set up in 1991 by the late Martin Hutchinson - his objective was to put research into practice. In ICI's heyday Martin ran its dairy farm at Henley Manor, near Crewkerne on the Somerset Dorset border and undertook some excellent basic research and demonstration work, including running a herd on zero concentrates. He said it was very simple to measure their yield from forage "Just lift the lid of the bulk tank and there's your yield from forage".

When ICI decided to quit farming he carried this practical and tangible approach through into setting up Kingshay as an independent dairy farmers' organisation. This coincided not only with the loss of ICI's commercial demo farms but also the closing down of the government funded Experimental Husbandry Farms such as Liscombe EHF in Somerset, where some very farmer friendly work had been done on silage additives, resulting in the Liscombe star system to help farmers decide if an additive was required.

Kingshay took this work forward by developing a means of testing silage additives and reporting the results to the growing number of members. Not all the additive manufacturers were delighted by the results when their products were shown to be less effective than fresh air and sunshine. This is an excellent example of the pioneering near market research that established Kingshay's reputation for independent farmer-focused work. We continue to test additives across the full range of forages to this day and indeed our system is recognised by the EFSA – (European Food Safety Authority) for its product accreditation scheme. More importantly our work has helped farmers save many thousands of pounds.

We were based at Henley Manor for the first nine years of our existence, using the Elizabethan manor house as our very splendid if rather draughty headquarters. ICI had sold the farm to three local farmers one of whom was Richard Barber. With his tremendous co-operation we were able to conduct many of our trials on his land. When the manor house was sold for development in 2000 we shifted our farm base 20 miles north to Bridge Farm, near Glastonbury. Here we rent offices converted for us by the owner (and current RABDF Chairman) David Cotton in a grade II listed building, parts of which date back 700 years.

Kingshay has grown and developed since those early days but the core of what we do remains unchanged – providing practical research based advice to livestock farmers throughout the UK who pay us an annual fee to receive the information. We have members in all corners of the country to whom we supply our trial reports and twice monthly Farming Notes. These are technical bulletins researched and written by our dedicated team of specialists, covering the full range of subjects from the latest results of our own trials to updates on policy. They also receive our Monthly Checklists which cover a range of issues relevant to the month ahead. This might be reminders on weed control in emerging maize crops to a summary of the impact of the latest shifts in the regulatory goalposts. Never more than two sides of A4 the notes are concise and to the point, recognising that farmers need the facts without the waffle. As part of their membership we encourage members to phone us with their queries and many take advantage of this valuable resource.

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The scope of our work has grown over the years to include a range of services. A far seeing group of Kingshay members brought together in the mid nineties as an advisory panel said that they needed to be able to identify their total costs of milk production and be able to compare them to others. This was a long time before such profit comparison facilities existed. So we set out to develop a dairy service to do just that. It is now the largest dairy costings in the UK and is also used by herds in Canada and Europe and we even had a user in South Africa (until the locals stole his telephone line). Users can input their own figures on line at www.dairymanager.net and see the results immediately on screen. It is a good example of how we have combined our skills as practical agriculturalists with our extensive IT skills. These same skills have been used to research and develop the first farm carbon footprinting model to be accredited by the Carbon Trust. This is used to assess the environmental impact of milk and meat producers supplying one of the major supermarkets.

Away from the keyboard we provide individual one to one on-farm advice using a UK wide network of consultants and associates who help to complete the route taking research into practice.

Our work has developed in many ways to reflect the challenges and demands that today's livestock farmer has to master to ensure a profitable and sustainable business. For example we are currently running a pilot trial to examine the effectiveness of a range of slurry additives. Many ambitious claims are made for these products from reducing crusting in the slurry store to enhanced nutrient availability. How does the practical farmer know which of these claims are marketing hype and which to believe? We expect our carefully controlled trials to help find the effective treatments and expose the muck and magic products. In the process we will be helping farmers to reduce their farm's environmental impact while enhancing profitability.

We have developed Kingshay's approach on the strong belief that a healthy herd is pivotal to a healthy business. To achieve that a farmer needs to master a multiplicity of skills and disciplines and assemble around him a team of employees, suppliers, advisers and information that he can rely on. We have set out our portfolio to provide the means to measure, monitor and improve all the routes to a healthy herd. We are working closely with an increasing number of veterinary practices by providing a special veterinary associate membership. We have recently launched Health Manager which runs alongside our dairy costings to report on herd health status and identify the true cost of health issues.

We have developed a unique service called HowsMyHerd.com where a specialist adviser visits the farm to undertake a detailed audit of the cow's working environment and provide a comprehensive report on low cost ways to address high cost problems - simple things like removing the ridge tiles from the cow housing can transform the ventilation and massively improve living conditions without incurring huge cost. This service is led by one of our specialist consultants, Robert Mintern who won the 2009 Farmers Weekly Livestock Adviser of the Year Award.

At our base at Bridge Farm we have recently expanded our cubicle demonstration unit, where we have some 20 different makes and designs of cubicle division and lying surfaces on test. Cows are far more sensitive than many would give them credit and when given the choice they soon show you which ones they like and which they don't. And they really are not concerned how much they cost. The average cubicle costs about £70 a cow place but just for interest we made some out of second hand timber and string for about £5 and put them in the shed alongside some top of the market £200 cubicles. Guess what - the cows lay down more in the £5 ones!

That same sensitivity reveals itself when cows graze one of our grass and clover variety trials located on members' farms. These trials take the detailed work done by NIAB into practice under commercial conditions. We establish checkerboards of 8 metre squares of single varieties of grass with a single clover. The herd then has free access to them all and will very quickly show which ones they prefer - to a cow not all grasses are the same.



Visitors discuss cubicle design with Kingshay technical manager Dr Martin Yeates at a recent open day

Our specialist soils work, developed in association with Nuffield Scholar Jo Scamell, helps farmers to re-establish healthy soils to produce healthy forages which in turn influence herd health. Years of simplistic NPK fertiliser programmes have left many farmers with soils with major imbalances which are not identified by a basic soil analysis. We have conducted trials and demonstrations to show how these can be addressed and many members have followed our tailored advice for soil improvement with dramatic improvements in herd health and fertility without the need to resort to high cost commercial products. Training workshops have become a major element of our business. These further serve to bring research findings to life for practical farmers. We have invested a lot of time to develop a comprehensive portfolio of workshops covering health issues such as mastitis, lameness and fertility through to efficient energy and water use, through to business planning and staff management courses. These are delivered by our consultants and technical team at venues across the UK and include a comprehensive programme for one of the major milk buyers.

The future of farming is in the hands of the next generation and we recognise this by providing special membership for colleges. We have recently enhanced student access to our information by providing them with online membership privileges for the duration of their time at college and special membership rates for their first two years after graduating.

To progress in today's challenging farming economy the successful farmer needs to understand the impact on his business of factors *outside* his control and manage the factors *within* his control. Our information and advice aims to encompass the breadth. We very much believe that if you measure it, then you can manage it, hence the development of our various costings and recording services. It is no longer sufficient to think that if you farm well the money will come right. Attention to detail has long been the mantra of the farm adviser, often derided by the client who may not perceive the potential benefits of small adjustments to his farming practices. When I am asked what makes one farm more profitable than another the answer is that it's a combination of a huge range of small things which together add up. For example we have long promoted grass and forages as being the cheapest feed for milk production. If a producer with 150 cows saved only half a kilo of feed per cow every milking by making better use of forage, this would be worth more than £10,000 in a year. This is very much what Kingshay aims to provide – practical well researched advice and services that save our members time and money helping them to enhance the sustainability and profitability of their business.



Kingshay senior consultant David Pettitt demonstrates the importance of soil structure during a workshop.

What of the future?

Growing the Kingshay model - It is a continuing frustration to me that our information and support is limited to those producers who choose to invest in themselves by paying for our information and services. There are many more farms out there that could benefit. We are proud of the strong reputation and presence we have established in the industry and would like to see our support available to many more farms. But we have to balance our limited resources between actually conducting the research and marketing ourselves. We survive, and indeed thrive, in a commercial world with no subsidies. The Kingshay model has adapted and modified over the years to match the changing demands of the marketplace so that we have grown as a company and been able to invest in innovative ways to get our messages out via the web, workshops, on-farm advisers and so on. The drive to succeed in a commercial environment keeps us sharp and focused on what our customers need.

Our objective is to provide leading independent and practical research, advice and services to progressive producers. We recently undertook some research into what our members consider to be the major issues facing them in the next decade. The clear need was to continue producing food cost effectively while taking up the new opportunities to be become energy farmers but at the same time reducing the impact on the environment of their farming activities. Our role will continue to be one of helping producers identify the genuine opportunities in both food and energy production to build sustainable businesses.

We will continue to innovate and grow, expanding the scope of our work and the geographical spread beyond these shores. Farming entrepreneurs of the future recognise the value of reliable, well researched information from an independent source such as Kingshay and we very much look forward to playing our part in helping those producers to grow sustainable and profitable businesses.