

News

Providing practical support to professional producers

THE FUTURE'S BRIGHT, THE FUTURE'S PRECISE

When Dr Martin Cooper made the first ever mobile phone call in 1973, he probably would not have imagined that 40 years on his invention would be able to alert farmers of bulling cows, locate stolen machinery and record grass covers. The current technology boom in farming heralds an exciting time in agriculture. With food security and environmental impact becoming a growing concern globally, farming needs to use every tool at its disposal to increase efficiencies and output while at the same time reducing the environmental burden inherited by future generations.

Already widely adopted in the arable sector, precision technology is becoming a more familiar concept in dairy farming. Our TSB funded development of a system to automate body condition and mobility scoring is an example of a new precision tool for dairying. It will detect much more incremental changes than the human eye, thus allowing earlier detection and treatment of lameness and tailoring of rations to optimise health, fertility, yield and profitability. No technology will ever be a complete substitute for good stockmanship, however cows are very hardy creatures and by the time

an issue becomes apparent with a physical indicator or behaviour, it may be quite advanced in its development. By regularly measuring indicators such as weight, BCS, milk composition, body temperature etc. you increase the chance of detecting issues at the sub-clinical stage. Particularly in larger units where skilled labour may be harder to come by, precision technologies can allow more consistency and reliability. The key to the success of such tools will be interpreting and using the data to influence management decisions.

With the world population predicted to rise to 9

billion by 2050, global food production will need to double. Embracing precision technology into the daily management of dairy farms will be essential to achieve sustainable intensification of food production.

Several members of the Kingshay team have been completing distance learning modules for those in the agri-food sector, as part of the Advanced Training Partnership postgraduate training project through IBERS - Aberystwyth University, Bangor University and NIAB-TAG. To find out if you are eligible to study or for more information visit www.atp-pasture.org.uk/

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Kingshay on the Road 2014



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Twice a month, Kingshay's farmer, consultant and vet members receive Farming Notes, along with a monthly checklist and have access to previous ones in the members' area of the website at www.kingshay.com. Here are some highlights from those produced in recent months:

Soil – appreciating its full value - Humans depend to a large degree on goods provided by natural and managed ecosystems. Their value to agriculture and the wider environment is enormous and often underappreciated, or not known at all.

Footbaths - Foot bathing can be a valuable tool in controlling lameness in a herd, but it needs to be well implemented and managed to be effective.

Digital Dermatitis - Since it was first recorded in the UK in 1984, digital dermatitis has become endemic in cattle herds and has managed to spread to other livestock species.

Summer Catch Crops - Summer catch crops can provide a useful supplement to grazing in late summer when grass quantity and quality may be reduced.

Calcium & Phosphorus in Lactation Diets - Calcium and phosphorus are two of the most important minerals for dairy cows, however many diets lead to an oversupply of phosphorus and an undersupply of calcium.

Zero Grazing - Not just a method of feeding housed herds, zero grazing can actually be used very successfully alongside traditional grazing as a way of improving utilisation from grass.

Caustic Treated Grain - Caustic treated grain represents a high-energy feed with better rumen stability than other starch sources.

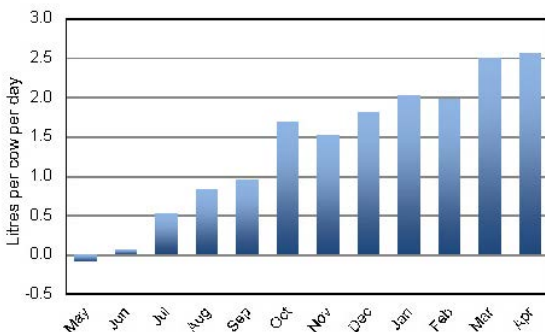
DAIRY MANAGER UPDATE

The first spring grazing months of 2014 have seen a huge improvement on herd productivity compared to last year, with 85% of herds using Kingshay Dairy Manager costings seeing an increase in daily milk yield.

Monthly Results - This Year	Jan-14	Feb-14	Mar-14	Apr-14
Milk Yield (l/cow/day)	26.4	26.7	26.8	27.6
Milk from Forage (l/cow/day)	6.6	6.2	7.0	9.0
Milk Price (ppl)	33.5	33.6	33.5	32.9
Concentrate Use (kg/cow/day)	8.7	8.9	8.6	8.1
MOPF (£/cow)	£171	£156	£177	£181

Figures for April 2014 show daily milk yields were up 2.6 litres per cow per day on last year. Margins were up 37% due to 10% higher yields, 11% higher milk prices (although lower than March 2014 due to seasonal payments) and 17% lower feed costs.

This increase in yield can be

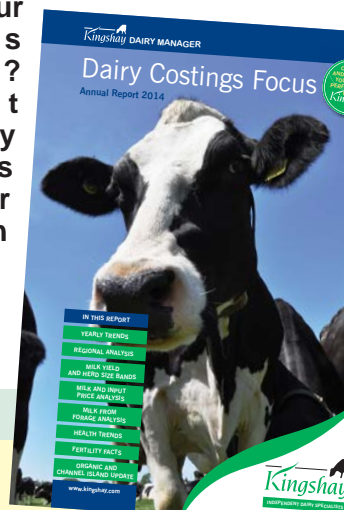


attributed to better grazing conditions. Producers averaged 9 litres per cow per day from forage, compared to 6.4 litres in April 2013, reducing the need to feed more concentrates during grazing.

Feed rates were similar but the cost of concentrates went down from £263 per tonne last year to £245 this year, lowering feed costs by 17%.

For the full April 2014 results go online - <http://www.kingshay.com/dairy-costings/latest-results/>

How do your margins compare? Contact Kingshay to discuss your production challenges.



HOT OFF THE PRESS!

The 2014 Dairy Costings Focus Report is now available!

Visit www.kingshay.com to download your free copy.

KINGSHAY'S SALT TRIAL FOR GRAZING

Last summer we investigated whether applying salt to pasture results in better grazing. Agricultural salt was applied in wide strips to a paddock known for its patchy grazing and low sodium levels. Grass cover was monitored with a plate meter, regular forage mineral analyses were performed and cows were filmed using a time lapse camera to identify preferential grazing behaviour.

We found that 'cows like salt' was not the end of the story – and discovered how much salt was too much!

This trial report is now available to Kingshay members.



Wales has a very suitable climate for growing grass, making perfect sense for dairy farmers to optimise the use of the grass they can grow.

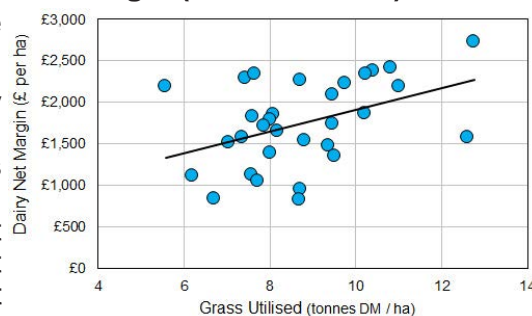
Kingshay has been involved with the dissemination of the results of a three year (2011–2013) project with the Dairy Development Centre, managed by John Owen. A detailed report and farmer booklet have been produced, which include individual farm profiles with their results. The project received funding through the Rural Development Plan for Wales 2007-2013, which is funded by the Welsh Government and the European Agricultural Fund for Rural Development, Farming Connect and DairyCo, to monitor grass production and utilisation on twelve dairy farms across Wales, both conventional and organic. The purpose of the project was to identify best practice from high performing farms, to be able to recommend methods for improving grassland management and utilisation on dairy farms across Wales.

Weekly recordings of grass growth were taken by the technicians using rising plate meters and recording through the AgriNet Grassland Management Software program. Assessments were made on all

farms of sward quality and soil health, together with cow health (body condition scores), herd performance and herd profitability.

The project encountered many challenges with the weather, particularly in 2012. However, this allowed the monitoring of grass growth and utilisation to be evaluated against management practices in different growing conditions, and showed that productive grassland can be achieved with good management, despite heavy rainfall or unseasonably low temperatures. Grass growth results varied each year but conventional farms produced averages of 10.9t DM/ha and organic farms produced 8.0t DM/ha, with an impressive overall utilisation average of 84%. Well managed grass has a production cost of £97/t DM and a value of £197/t DM, a 100% return on cost. Project farms that utilised more grass per hectare, produced more milk from forage per hectare and tended to have a higher

Link between grass utilised and net margin (annual results)



net margin.

The detailed study of these twelve project farms has clearly shown that focusing on producing the highest dry matter yield of grass per hectare, combined with effective grassland management, results in high levels of grass utilisation, a good proportion of milk from forage, low feed costs and healthy profits -

True Value From Grass.

This report will be sent out to Kingshay Members shortly



THE RACE IS ON



The Kingshay HowsMyCow imaging project is now well under way. Working with our project partners from the Centre for Machine Vision at UWE we are making good progress on developing BCS, mobility and liveweight technology through new imaging techniques and analysis methods.

A new race has been built to enable the regular assessment of cows without affecting the flow as they exit the parlour.

The walkway has been designed to encourage the stress free movement of cattle to ensure that all traits can be assessed unobtrusively. Above the race a building has been constructed to house various imaging equipment and incorporates a viewing gallery to aid the project team with their work.

As the project progresses more information on this work will be published to Kingshay members.





Gibson Consultancy is an independent advisory service dedicated to automated milking and feeding systems. Here Tim Gibson answers some of our questions on managing robots.

The big draw of switching to robots seems to be the perceived reduction in labour. Is this the case?

Yes, large units can save labour up to a point, although on-call wages of employed staff can dilute the financial saving. One-man-bands with one robot can save the drudgery of milking solo daily, but suitable relief needs to be factored in or you risk becoming more tied to the farm.

Everybody says yields go up – is this true?

In most cases yes, but this depends on your yield and milking frequency before conversion. An 11,000L 3x a day herd will not see big yield rises, but the payback will come from benefits to cow health.

Are they better for cows than parlour milking?

I am certain they are because they remove the stresses of routine milking and standing times on concrete. The robot sensors should also detect mastitis much sooner than most human milkers.

Do you have to feed concentrates in the robot?

You need to feed in the robot to get cows to visit. There was a myth that a cows' desire to be milked would

lead it to the robot. You don't have to use bought-in concentrate as most models can handle a blend and some can even feed molasses.

Forced vs. voluntary?

I have tried both methods on my own farm and my experience is that 'voluntary' is best for animal welfare. You will pick up a sick cow sooner as she will not present herself to be milked. 'Forced' is also false economy as cows can naturally eat up to 12 times a day, but will not jump through hoops to get to silage that often when gates are put in the way.

I'm not very computer savvy, do I need to be?

Computer literacy is key as you need to monitor how the herd is behaving and be able to detect if settings and measurements are right. Robots are becoming more controlled by the software, so you need to use it to 'drive' your robot. This can be hard to get your head around if your computer skills stop at your mobile phone.

How do you get cows through a footbath with robotic systems?

I prefer to walk all the cows through a fixed footbath at a cubicle end or crossover a couple of times each week when bedding up, rather than putting a bath at the exit of the robot.

Most robotic herds seem to be fully housed. Can robots work well in a grazing system?

Yes, where grazing works well in the first place The cows are enticed home

Kingshay Dairy Manager Results Compared

ANNUAL RESULTS - Year End March 2014

Holstein/Friesian, Conventional Herds	Twice a day milking	Three times a day milking	Robotic milking
Cows in herd	175	405	146
MILK PRODUCTION			
Yield per cow litres	7,858	9,209	8,727
Yield from all forage per cow litres	2,296	1,203	2,044
Milk Price pence	31.82	32.55	31.69
Total milk value per cow £	2,501	2,997	2,766
FEED			
Concentrate use per cow kg	2,456	3,278	2,905
Concentrate use per litre kg	0.31	0.36	0.33
Concentrate price per tonne £	256	253	266
Other purchased feed cost per cow £	75	128	91
Total purchased feed cost per cow £	704	956	865
Total purchased feed cost per litre pence	8.96	10.39	9.91
MARGINS			
MOPF per cow £	1,797	2,041	1,901
MOPF per litre pence	22.87	22.16	21.79

to the robot with a fresh paddock. It works well with a controlled, well managed grass platform, but not if too much grass is offered or when grass volumes are not high enough to tempt the cows through the robot.

Are they cost effective or an expensive toy?

They are definitely a more expensive way to milk cows than in a parlour but there are many advantages providing the system is managed well. Make sure you know the long term running costs, as the initial purchase price can have no bearing on the long term profitability once repairs mount up. Get a written contract with the supplier/agent to keep in control of longer term system costs. Some may try to tie you into expensive branded chemicals, parts and consumables as a condition of after sales support, so careful negotiation at an early stage can avoid unexpected costs later on.

For more information, contact Tim on 07711257776, email tim@tim-gibson.co.uk or visit his stand at this year's Livestock Event.

KINGSHAY ON THE ROAD 2014



This year's Grassland & Muck Event held at Stoneleigh in Warwickshire was a very successful two day event with many turning up from far and wide to admire the impressive displays of machinery and farming kit on offer. The Kingshay stand caught many a curious eye with our freshly dug 2ft hole demonstrating the importance of analysing your soils as did our piles of grass, demonstrating how much a cow needs to eat in a

day!

The next time we are exhibiting this summer is the Livestock Event at the NEC on the 3-4 July. Come and find us on stand BM159 and say hello.

