

Report highlights trends that offer UK

# KPI figures reveal impro

The latest key performance indicator (KPI) figures show that herd health and fertility have improved significantly across the UK herd during the past five years. We spoke to the author

of the latest report to find out more.

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**I**ncreasing the proportion of cows served by 80 days post calving and getting more cows in calf by 100 days has contributed to a reduction in calving interval across NMR recorded herds. Just some of good news highlighted by the latest University of Reading's annual Key Performance Indicator (KPI) report for the year ending August 2015.

"The figures also show positive trends in somatic cell counts, with 60% of herds now boasting an annual average cell count of less than 200,000 cells/ml," says the report author and vet James Hanks. The report compares 32 health, fertility and production parameters from a cross section of 500 black-and-white herds that have at least two years of full NMR records. Many herds remain in the sample year on year, with 92% of herds included in both the 2014 and 2015 analyses.

## Conception rate

"The median level, or level achieved by half the herds, for cows served by 80 days after calving has increased from 46% in 2010 to 57% in 2015," says Dr Hanks. "While conception rate has remained almost unchanged, producers are serving cows earlier. Heat detection, measured by the percentage of inter-service intervals that equate to one oestrus cycle, has also improved. This means that cows that do not hold to first service are getting more chances to conceive. As a result, the percentage of cows pregnant by 100 days has increased from 26% to 32% since 2010."

He adds that this also explains much of the 14-day reduction in median calving interval, from 424 days to 410 days. "One in four herds now achieves a

calving interval of 396 days or less." Somatic cell count (SCC) parameters show similar positive trends. Dr Hanks draws particular attention to the reduction in the numbers of chronic high cell count cows – those with consecutive cell counts above 200,000cell/ml – maintained in the 500 NMR-recorded herd sample. "The percentage of chronic cows kept in herds has decreased every

year since the report was first published in 2010. This is very encouraging because the chronic cows are the reservoir of infection and their number is strongly correlated to the herd cell count.

## Increased milk yield

"The number of herds where chronic cows make up more than 15% of the cows milked has nearly halved from 41% of herds in 2010 to 21% of herds in 2015. This has to be the consequence of better herd health management."

Improved health and fertility parameters have contributed to an increased median 305-day milk yield for the year ending August 2015 of 7,905kg – an increase of 505kg since 2010. "The average yield achieved by 25% of herds is 8,813kg," adds Dr Hanks.

Particularly important, in view of its



producers a positive dairy message

# ved health and fertility

impact on herd efficiency, is the improvement in lifetime daily yield with an increase in the median from 10.5kg per day in 2010 to 11.9kg per day in 2015. The current target, set by the top 25% of herds, is 13.9kg per day.

“Improvements in lifetime daily yields are the result of better health, fertility and production across the herd. And producers should be encourage by these trends. The target, achieved by the

top 25% for each parameter, provides realistic and achievable goals for the industry.”

Data from the KPI report is used by producers, advisers and vets to benchmark individual herd performance for 32 parameters against that of the 500 study herds, as part of NMR’s InterHerd+ dairy management program. “Producers can use this information to see where the strengths and weaknesses

are and where they can make improvements that will help to improve their efficiency in a cost-effective way.” |

➔ *Key Performance Indicators for the UK national dairy herd: a study of herd performance in 500 Holstein Friesian herds for the year ending August 31, 2015, (by James Hanks & Mohamad Kossaibati) can be downloaded at [www.nmr.co.uk/reporting-analytics/interherd-kpi-study-2015](http://www.nmr.co.uk/reporting-analytics/interherd-kpi-study-2015)*

## Trends in key parameters between 2010 and 2015

Analysis of 32 key performance parameters in a cross section of 500 NMR-recorded Holstein/Friesian herds for the year ending August 2015:

- Improvements in fertility parameters, particularly calving to first service and percent in calf by 100 days with no change in conception rates
- Improved 305-day yields, by 505kg

- Lower median somatic cell count and fewer herds maintaining large numbers of chronic cows
  - Improvement in lifetime daily yield as a result of improved health, fertility and age at first calving
  - Culling rates have remained largely unchanged at 24% of cows per year
- New targets for each parameter are

available based on the performance of the top 25% of herds in the 500-herd sample.

These continue to be used by technical advisers to highlight strengths and weaknesses in performance of individual herds and to provide producers with realistic and achievable target values.

Table 1: Comparison of median and target values derived from the study of 500 NMR-recorded herds in 2015 with the original study in 2010

parameter	median		target best 25%	
	2010	2015	2010	2015
<b>year of the study</b>	<b>2010</b>	<b>2015</b>	<b>2010</b>	<b>2015</b>
culling rate (%)	24	24	18	20
culling/death rate in first 100 days of lactation (%)	7	5	4	3
age at exit (years)	6.6	6.3	7.4	7.0
age at exit by lactations (years)	3.9	3.7	4.5	4.2
served by day 80 (%)	46	57	59	67
conceived 100 days after calving (%)	26	32	33	39
calving-to-first-service interval (days)	105	80	87	71
calving interval (days)	424	410	409	396
age at first calving (years)	2.4	2.3	2.3	2.2
conception rate (%)	32	32	40	39
service intervals at 18-24 days (%)	30	34	38	40
service intervals >50 days (%)	32	24	22	16
eligible for service that were served (%)	27	33	37	41
eligible for service that conceived (%)	9	11	13	15
lifetime milk/cow/day (kg)	10.5	11.9	12.6	13.9
milk/cow/year (kg)	7,665	8,222	8,760	9,313
average protein (%)	3.27	3.30	3.33	3.36
average fat (%)	3.96	3.96	4.12	4.11
305-day yield (kg)	7,400	7,905	8,300	8,813
average SCC ('000 cells/ml)	210	184	169	151
SCC >=200,000 cells/ml (%)	24	20	19	16
SCC >500,000 cells/ml (%)	9	7	7	6
1st recording SCC >=200,000 cells/ml (%)	20	17	15	13
chronic SCC >=200,000 cells/ml (%)	14	11	10	8