

### 3.9 UK (Katharine Leach, Catherine Gerrard, Susanne Padel)



Dairy farming in the UK is concentrated largely in the Western part of the country, where rainfall is higher and grass growing conditions more favourable. Organic dairy farming follows the same distribution. Both organic and conventional production include a range of systems, for example, autumn calving herds that are highly dependent on conserved forage and purchased concentrate but benefit from higher milk prices in winter, spring calving herds where the aim is to minimise concentrate input and produce milk as cheaply as possible from grass, and year-round calving giving the benefits of a steady income and less pressure to maintain a tight calving pattern. The most recent figures available for organic milk sales are 169 million litres sold in 2009/10, sold by the co-operative OMSCo, which provides 80% of the total UK organic milk supply. This volume constituted 3.3% of all national milk sales. Yogurt is the product with the largest organic share of the market (7% of the total yoghurt market). In 2009/10, organic milk output fell by 2%, the first drop since 2004. (OMSCo, 2010). Although the majority of conventional herds in the country are Holstein-Friesian, cross bred herds are relatively common in the organic sector.

#### 3.9.1 Characteristics of the case study farms

For the sustainability assessments, a total of 17 farms in both England and Wales were assessed, reflecting the locations of the farmer members of the two SME partners. Both SME partners are milk buying co-operatives that collect and buy milk from their members and sell it to other processors. The ten farms assessed in England were all members of the SME partner OMSCo, the Organic Milk Suppliers' Co-operative, with approximately 300 members, forming 80% of the UK organic milk supply. Information on the structure and performance of the complete population of organic dairy farms in the UK does not exist. Some data are available from the sample of 48 farms included in the Farm Business Survey and reported in the report on Organic Farm Incomes in England and Wales for 2010/11 (Moakes et al., 2012a). Data from this sample are combined in Table 12 with some from the population of OMSCo farms which record financial data. It should be noted that not all OMSCo members (and not all those undertaking the assessment) take part in this recording scheme. Seven farms representing the second, smaller SME partner in the project, the Welsh co-operative Calon

Wen, were also assessed. Calon Wen has a total of 27 farmer members and has a limited range of own-branded products.

OMSCo farms reflect the geographical spread of dairy enterprises across England, being more concentrated in the south and west of the country. All farms sold all liquid milk direct to OMSCo. Two herds were of British Friesian cows, one was Holstein and one Ayrshire. All the remaining herds included cross-bred cows with breeds including New Zealand and British Friesian, Holstein, Swedish Red, Norwegian Red, Montbeliarde and Brown Swiss. The remaining herds had Holstein or Friesian cows.

The Calon Wen farmers that took part in the sustainability assessment cover the geographical region from West Wales to the Shropshire border. Although all 27 members of the co-operative were given the chance to participate, six of the seven who volunteered were smaller producers with fewer than 100 cows. This balanced the tendency for larger than average herds in the OMSCo group (See Table 11). One of these farms had its own cheese-making business, but sold any surplus milk to Calon Wen. There were two single breed herds – one Ayrshire and one Holstein, and the rest were of cross-bred cows including most of the same breeds as those in OMSCo herds, with Meuse Rheine Issel also being represented.

Overall, the UK farms had been organic for an average of 13 years (range 3 – 30). The farms selected had slightly smaller herds and lower yields than the mean for OMSCo farms that recorded financial performance. This might be expected as larger and higher performance herds would be more likely to use the recording scheme mentioned earlier. The selected farms were similar in mean herd size to the farms included in the Farm Business Survey, but had slightly lower average yields. There was a wide range of concentrate inputs and stocking rates in the selected farms.

Several interesting aspects were observed on the farms selected. There were two examples of spring calving, cross-bred herds using very little purchased concentrate. Expert grassland management resulted in good milk production from forage. There was also a herd with very low antibiotic use, which achieved very good health and welfare. A third interesting farm type was a marginal upland unit. Across all 17 farms there was a range from small “one-man” units to much larger herds. One Welsh farm was well established in diversification into tourism, and another had a cheese-making business on the farm. There were few examples of novel forages, but one farmer included chicory and plantain in medium term pastures, chosen for their drought resistance. This resulted in a more productive and nutritious pasture, which could withstand more frequent grazing in drought conditions than a simpler grass/clover sward. Another farmer grew a mixture of lupins and triticale for wholecrop silage.

**Table 11 Characteristics of UK lowland dairy farms, SME farms (OMSCo) and all farms selected**

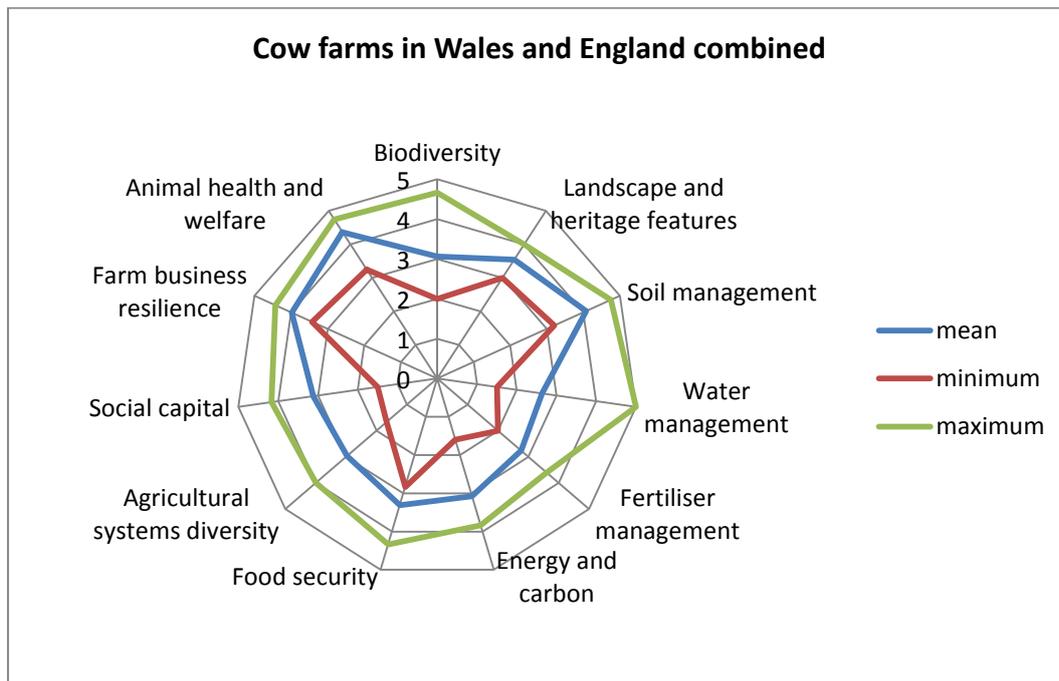
		Mean for 48 lowland organic dairy farms <sup>2</sup>	Mean for SME population <sup>3</sup>	Mean of farms selected from OMSCo and Calon Wen	Range of farms selected from OMSCo and Calon Wen
Farm size	ha	144	Unknown	204	46 - 422
Herd size	No. of adult cows	144	173	152	65 - 378
Stocking rate	Livestock units/ha	1.4	Unknown		
	Grazing livestock units/forage ha	1.4	Unknown	1.58	0.33 – 2.49
Milk sales	l/cow/year	6202	6539	5433	2710 - 7368
Level of concentrate fed to milking animals	kg/cow/year	Unknown	1400	Unknown	Unknown
Total purchased concentrate per cow <sup>1</sup>	kg/ cow/year	Unknown	Unknown	1020	100 – 1740
Milking cows per Annual Labour Unit	Milking cows per Annual Labour Unit	Unknown	Unknown	61	24 - 145
Labour input per unit area	Annual labour units/100 ha	2.19	Unknown	1.93	0.34 – 6.50

1 Data from the tool - may include some concentrate fed to other livestock on the farm, therefore not necessarily directly comparable with the line above

2 Moakes et al., 2012a

3 31 OMSCo farms recording financial performance

### 3.9.2 Results of the sustainability assessment in the UK



**Figure 19 Spur diagram for UK**

The distributions of scores for the various spurs are illustrated in Figure 19. For most spurs there was a wide range of responses across farms reflecting the interests of the owners.

Farms scored highly and relatively consistently on “Farm Business Resilience”, while “Farm System Diversity” was highly varied. The strongest activity within farm business resilience was information searching/networking. The other activities showed more variation.

Scores for “Animal Health and Welfare” were consistently high. Many of the questions referred to the Animal Health Plan, which UK farmers are required to have in order to be Farm Assured. However, despite selecting farms where good recording was expected, there was little accurate recording of disease incidence, especially where homeopathy is being used. Calculations of culling / replacement rates are often not made.

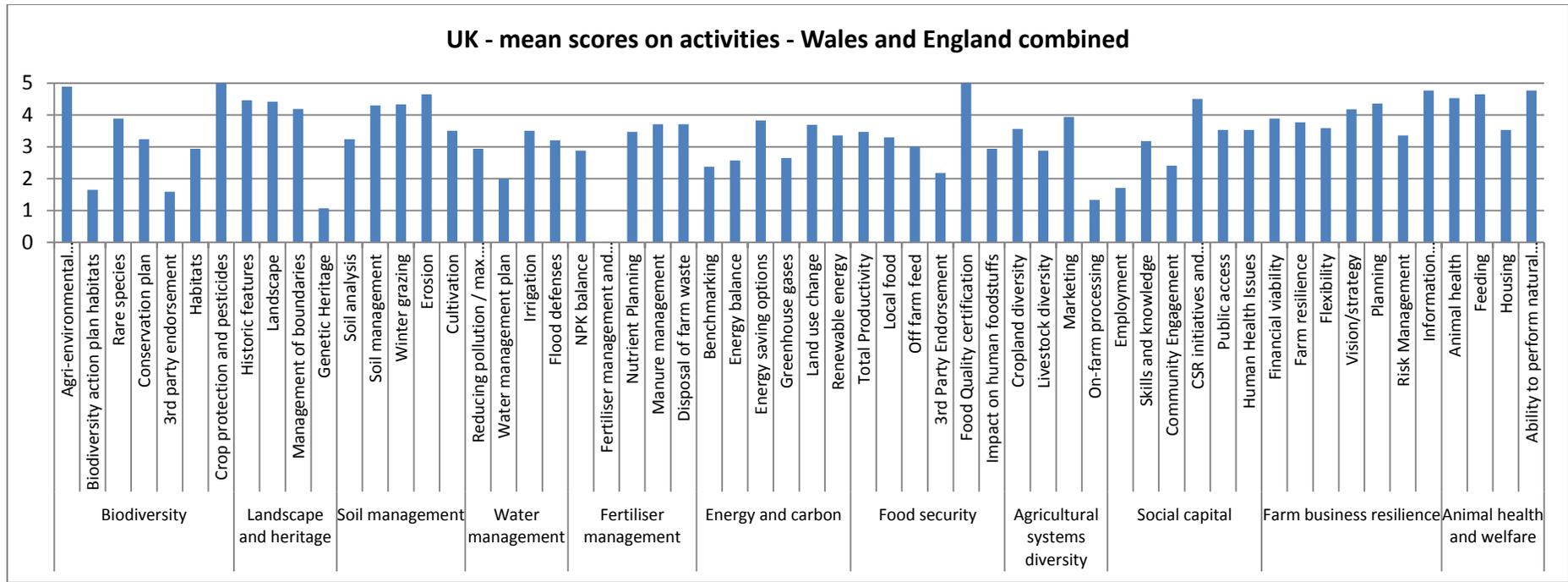
Overall, the maximum values for “Fertiliser Management”, and “Landscape and Heritage Features” were relatively low. Within “Fertiliser Management”, there was no particularly weak activity. N balance was low when compared with conventional UK herds (Romer et al, 2009), in the range 43 to 180kg/ha (mean 123); P balance averaged 22 and K balance 5kg/ha. The mean P balance was elevated by two farms which were importing rock phosphate fertiliser, because of concerns about low P indexes in soil. The mean estimated N fixation was 106 kg/ha. Within “Landscape and Heritage Features” genetic heritage only scored 1 or 2.

“Biodiversity” often scored quite low, although there was one exceptionally high maximum in England (on the marginal upland farm). Some farmers explained that lack of financial incentive prevented them from doing more to encourage biodiversity. It appears there is limited proactive conservation or habitat creation on dairy farms, although farmers generally felt that field boundaries, especially hedges, made an important contribution to biodiversity and landscape and some had been actively involved in creating new hedges and other habitat features. The question might be raised whether permanent pasture is sufficiently recognised as a valuable habitat by farmers and schemes (or indeed by the tool). For example, farmers often seem unaware of “red species lists” unless they have a designated site that is monitored by a third party. However, on questioning, there was generally at least one person on the farm who had an interest in and knowledge of natural species diversity, and some wildlife enthusiasts have a detailed knowledge of flora and fauna on their farms.

“Water Management” showed a particularly wide range of scores in the OMSCo group. This was likely to be caused by the variation in the necessity for irrigation or water conservation depending on local climatic and geological conditions. The highest score was achieved by the one farmer who had carried out a water audit and implemented some water-saving measures. The Welsh farms had a narrower range of lower scores, likely to be a result of their more similar conditions of high precipitation. The tendency for lower scores for “Fertiliser Management” in Wales may well be a result of the lack of Nitrate Vulnerable Zone legislation requirements, in contrast to England. “Soil Management” in Wales showed a slightly higher maximum, and “Social Capital” a wider range than in England. A contributing factor to the more consistent Social Capital activity score in England was the fact that all OMSCo farms are covered by an ethical trading agreement.

Consistently high scoring activities were agri-environment participation, cultivation and land use change (Wales), information seeking, animal health plans and animals’ ability to perform natural behaviour. Particularly low scoring activities were Biodiversity action plans, Genetic heritage, and on-farm processing (in England/OMSCo only), and water management plans (particularly in Wales).

Several farmers referred to the difficulties imposed by high prices of purchased organic concentrates. Those growing their own cereals were protected from this threat. Lack of funding for supporting biodiversity and landscape and heritage was often mentioned as a disincentive to work in these areas.



**Figure 20** Mean scores for activities for UK