



Current trends in British dairy management regimens

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ABSTRACT

This paper presents a summary of results from a 2012 survey that investigated feeding and housing management regimens currently adopted by dairy farmers in Britain. Responses from 863 farms provide a snapshot of dairy industry structure and a description of the range of management systems currently in operation. Outcomes highlight a diversity of management practices, showing that 31% of farms maintained a traditional grazing system with no forage feeding indoors during the summer, whereas 38% of farmers indicated that all their milking cows received some feeding indoors during the summer. A system of housing dairy cows for 24 h/d while they are lactating was implemented by 8% of farms, whereas 1% of farms did not house their cows at any time of the year. Statistical analyses were carried out on 3 distinct groups identified from survey responses: (1) farmers who did not undertake any indoor feeding during the summer; (2) farmers who fed all their milking cows indoors during the summer; and (3) farmers who continuously housed their cows for 24 h/d while lactating. Results showed a significant relationship between management type and herd size, and between management type and breed type; on average, herd sizes were larger within systems that feed indoors. No significant relationship was found between management type and farm location when classified by estimated grassland productivity. The results indicate that traditional all-summer grazing is no longer the predominant system adopted by dairy farmers and that other systems such as all-year-round indoor feeding and continuous housing are becoming more prevalent in Britain.

Key words: dairy, management system, confinement

INTRODUCTION

Britain has a long history of dairying, farmers currently produce 11.5 billion tonnes of raw milk annually, and the country ranks 10th among worldwide producers

in terms of volume (DairyCo, 2013c; FAOSTAT, 2013). National and “average farm” statistics reveal that the British dairy herd has dwindled from 2.3 to 1.5 million cows since 1996 (DairyCo, 2014c). At the same time, dairy production holdings have declined by more than 60% and in 2012 there were fewer than 12,000 farms in Great Britain (DairyCo, 2014a). Reductions in animal and producer numbers have been offset by an increasing average yield per cow, which has increased from 4,700 to >7,000 L since 1980 (DairyCo, 2012) and by increases in the number of farms producing >2 million liters of milk (DairyCo, 2013a). Having fewer dairy farms operating with increased numbers of higher-producing cows is not solely a British trend and has been reported in other European Union countries (EC, 2012) as well as the United States (USDA-NASS, 2010).

Demand for a year-round milk supply means that although some British farmers can take advantage of favorable grass growth, others choose to adopt systems with a greater reliance on conserved or imported feeds. Many farmers also use composite dairy production systems that lie somewhere in the range from low-input pastoral to high-input purchased feed-based approaches. Calls have been made to communicate, to all stakeholders, the merits of adopting a variety of milk production systems (Alvis et al., 2012), and lack of information on feeding systems has been identified as a barrier to reducing the environmental impact of milk production (DairyCo, 2009).

There is very little published information regarding the prevalence of dairy housing and feeding regimens on British farms, and such data could assist stakeholders and policy makers in the planning of proposed production increases following the removal of quotas. The proportion of housed dairy cows in Britain is also of interest to scientists studying the effects of a range of housing systems on the behavior and welfare of these animals (Haskell et al., 2006, 2013). The aim of this study was to carry out a farmer survey to assess the distribution of production methods across dairy farms in Britain to develop a reference measure.

MATERIALS AND METHODS

Data collection was managed by the Cattle Information Service (CIS; Rickmansworth, UK) which con-

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ducts milk recording throughout Britain, and surveys were completed by farmers at farms visited by CIS for milk recording purposes in May and June 2012. Some farmers did not wish to participate; however, all had the opportunity to answer the questions and a total of 863 surveys were returned from a possible 1,879 farms visited, giving a response rate of 46%. Table 1 lists the survey questions, and Figure 1 shows a flowchart of the numbers of responses from question 3 (excluding questions 4–6 that relate to dry cow housing, which was not analyzed in this study). As well as answering the questions, respondents indicated their herd size, breed type, and county of residence.

Results were collated in Excel (Microsoft Corp., Redmond, WA), and distributions of herd size, breed type and county location were collated and compared with the United Kingdom (UK) national figures. The surveyed farms were located across Great Britain (GB; England, Scotland, and Wales). Some respondents completed the questions but chose not to include all or some of the response variables such as herd size or farm

location; these surveys were included in the analysis of management type. Eleven responses were incomplete; these surveys were included in the response total, but were not analyzed as no management type could be determined. Of the 863 surveys, 31 respondents did not provide the size of their herd, 82 did not indicate breed type, no county response was given by 32 respondents and, within these groups, 18 surveys contained none of the 3 variables. The survey questions were designed to ensure that all possible UK dairy feeding and housing practices were captured; hence, by completing the survey, respondents could categorize their own herd into their respective management type groups. Before approaching farmers, the survey was sent to industry specialists to check that the questionnaire did indeed cover all possible types of dairy management.

To distinguish any differences between management style groups, data sets of management type responses that corresponded to 3 key UK dairy system types identified by DairyCo (2012) were analyzed and management styles were characterized as follows: (1) grazing:

Table 1. Dairy farm management survey

Question	Answer	Comment
1 Do you keep cows indoors at any time during the year?	Yes No	Go to question 3 Go to question 2
2 Please confirm that cows are never housed	Yes No	Thank you; no more questions Go to question 3
3 Do you keep all your cows indoors in winter and outdoors grazing without any indoor feeding during summer months?	Yes No	Thank you; no more questions Go to question 4
4 During the summer months, do you keep dry cows indoors?	Yes No	Go to question 5 Go to question 7
5 Do these dry cows have access to a loafing area?	Yes No	Go to question 6 Go to question 7
6 What type of loafing area is there for dry cows?	In building Outside concrete area Field	Go to question 7
7 During the summer months, do you keep milking cows indoors for feeding, even for a few hours/day?	Yes No	Go to question 9 Go to question 8
8 Please confirm that milking cows are not housed during the summer months. If cows are housed with access to a loafing area, then answer no	Yes No	Thank you; no more questions Go to question 9
9 Are all milking cows housed for at least part of the day during the summer months?	Yes No	Go to question 11 Go to question 10
10 Which milking cows are housed?	High yielders/early lactation Others	Go to question 11
11 Are different groups of cows housed for different times during the 24 h?	Yes No	Go to question 12 Go to question 14
12 Are any of the cows housed all 24 h/d with or without access to a loafing area?	Yes No	Go to question 13 Go to question 15
13 Which cows are housed all 24 h even with access to a loafing area?	High yielders/early lactation Others	Go to question 16
14 Are your housed cows kept inside 24 h/d with or without access to a loafing area?	Yes No	Go to question 16
15 Which cows are housed for less than 24 h/d?	High yielders/early lactation Others	Go to question 16
16 Are any individual cows housed all 24 h, even with access to a loafing area, for 365 d/yr?	Yes No	Thank you; no more questions

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