

MASTITIS IN ORGANIC DAIRY HERDS IN ENGLAND AND WALES

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Bovine mastitis has been recognised as one of the main animal health concerns for organic dairy farmers in the UK. The organic standards prohibit the use of routine dry cow antibiotic preparations at drying off and encourage mastitis control by good husbandry, breeding and optimisation of production levels. The purpose of this study was to establish the level and nature of mastitis on organic farms in England and Wales.

A total of 16 organic (O herds) and 7 matched, conventionally managed herds (C herds) were recruited for a longitudinal two-year case study survey. Data reflecting mastitis incidence and control and treatment strategies were collected at three-monthly farm visits. The SCC and mastitis incidence data were analysed with a herd management software, Interherd™ (InterAgri plc).

Clinical mastitis incidence in survey herds is presented in Table 1. Whilst overall mastitis incidence was significantly lower ($P < 0.001$) in organically managed cows than in conventionally managed cows, the incidence rates during the dry period were significantly higher in O herds than in C herds ($P < 0.001$). There was no significant difference in herd level mastitis between the two groups and a wide variation in incidence rates amongst both O and C herds. Both clinical mastitis incidence and individual SCC measures increased significantly with age of the animal in both farm groups. In C herds, the housing period incidence of clinical mastitis was significantly higher than during the grazing season, whilst in the O herds there was no difference in the seasonal incidence rates. Among the O herds, clinical mastitis incidence was similar between those farms that used antibiotics and those that used alternative medicine (mainly homeopathy) to treat and prevent mastitis.

Table 1. Mastitis incidence (cow cases/100 cow years)

	O herds	C herds
Overall	36.4	48.9
Lactation	37.6	54.5
Dry period	28.9	9.2

Average individual cow SCC levels were significantly higher in O herds (135,000 cells/ml) than in C herds (84,000 cells/ml; $P < 0.001$), resulting in high subclinical mastitis levels in O herds (individual cow SCC > 200,000 cells/ml in 34% of all measurements). The mean values of all bulk milk SCC-measurements (BTSCC) from the survey farms were significantly higher on the organic farms (260,000 cells/ml) than on the six conventional farms (162,000 cells/ml; $P < 0.001$). There was no significant difference in CMSCC levels between those organic farms that received a financial incentive to produce low SCC milk compared to those that did not receive such benefit, even though the BMSCC levels were significantly higher in the latter group.

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