

Herd-level management and housing of Canadian robotic milking herds

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The objective of this study was to describe housing and management practices of robotic milking herds across Canada. We visited 197 robot farms (Western Canada: n=50, Ontario: n=77, Quebec: n=59, Atlantic Canada: n=11) from April to September 2019 and collected data on barn design and farm management practices through an on-farm survey. Milk recording data for the 6 mo prior to farm visits were collected from Lactanet. Farms ranged from 38 to 1000 lactating cows (mean = 111±101), 1 to 17 robot units/farm (mean = 2.4±1.9), averaging 47.3±9.1 cows/robot, 36.6±4.9 kg/d of milk, 4.1±0.3% fat, 3.4±0.2% protein, and a herd level SCC of 200,882±94,276 cells/mL. Herd parity averaged 2.4±0.3 lactations, DIM averaged 174±20, and they were composed predominately Holstein (n=178; other breeds=19). Barns were predominately new builds (n=140), with the remainder being retrofits (n=57). The predominant barn design for lactating cows was free stall (n=183; pack: n=11; mixed n=3), with a free flow cow traffic system as the main design (n=173; guided=24). Tunnel ventilation was the main form of ventilation (n=61), followed by ceiling and natural (n=58), panel and natural (n=42), panel, ceiling and natural (n=19), and natural (n=16). Feed was delivered 2.8±3.6x/d (range = 1 to 14 x/d) and pushed up 12.8±8.4x/d (range = 1 to 41x/d). The primary method of feed push up was through the use of automated feed pushers (n=142; manual: n=37; other: n=18). Stalls were bedded 6.6±3.6 times per week, with the main bedding material being wood products (n=64; sand=52; straw=41; other=28). Stalls were raked 2.8±1.4x/d, alleys were cleaned 12.2±8.2x/d, and an alley scraper was the predominant cleaning method (n=173; autonomous=18; other=6). Overall, the results of this study demonstrate the current trends and benchmarks in management and housing practices across robotic milking farms in Canada.