

Early lactation disease incidence in Holstein cows across multiple US regions

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Incidences of transition cow diseases in Holstein cows across all herd components of the grant (n=10,959 in 16 herds) calving during the warm (WS: May-Aug) and cool (CS: Oct – Jan) seasons were assessed. Cows were enrolled at parturition and monitored weekly for multiple diseases until 60 DIM. Diseases included retained fetal membranes (RFM), metritis (MET, 7±3 DIM; foul-smell, watery, brownish vaginal discharge), subclinical ketosis (SKT, 7±3 DIM; serum BHBA > 1.0 mmol/L), mastitis (MAS; farm records), left displaced abomasum (LDA), pneumonia (PN; farm records), clinical endometritis (CE 28±3 DIM; from mucopurulent to fetid vaginal discharge) and lameness (LAM 35±3 DIM; score >3). Study locations included the Northeast (NE; 4 herds), Midwest (MW; 6 herds), Southeast (SE; 1 herd), and the Southwest (SW; 5 herds) regions. Disease incidences were estimated by region and season (Table 1). Associations between disease occurrences and region, calving season, and parity (1 vs. ≥2) were tested by logistic regression. The effect of region on disease occurrences was only significant for LAM (P <0.05). In contrast, season of calving and parity (data not presented) were associated significantly with the risks of transition diseases for all the disorders analyzed. Table 1. Incidence (%) of transition cow diseases by U.S. region and season of calving

	Northeast		Midwest		Southeast		Southwest	
Trait ¹	WS2	CS2	WS	CS	WS	CS	WS	CS
RFM	8.0	5.9	7.4	5.4	15.0	7.6	4.3	2.9
MET	21.7	23.8	19.5	20.2	19.7	18.5	27.6	24.8
SK	41.8	18.7	25.9	15.5	24.9	20.1	31.3	14.6
MAS	26.1	16.0	6.1	5.5	18.0	21.3	12.0	8.1
LDA	3.0	5.6	2.9	1.4	6.0	4.0	1.0	1.0
PN	1.1	1.5	1.7	1.8	3.8	13.4	7.1	3.5
CE	15.4	32.5	25.9	20.4	23.4	42.9	24.3	26.1
LAM	11.3	2.6	2.1	8.1	1.7	12.1	5.4	2.0

¹RFM = Retained fetal membranes (>24h postpartum)

MET = Metritis (scores 5; 5-point scale)

SK = Subclinical ketosis (BHBA>1.0 mmol/L)

MAS = Cases of clinical mastitis (farm records)

LDA = Left displaced abomasum (farm records)

PN = Pneumonia (farm records)

CE = Clinical endometritis (scores 3-5; 5-point scale)

LAM = Lameness (scores >3; 5-point scale)