

Associations between postpartum diseases and milk yield and changes in body condition between drying off and parturition of dairy cows in Argentina

P Melendez ^{*§}, F Bargo [†], G Tuñón [‡], and J Grigera [#]

* College of Veterinary Medicine, University of Georgia, Tifton, GA, USA

† PROLACT (FIL-UNLZ), EPG, Universidad de Buenos Aires, Buenos Aires, Argentina

‡ Universidad Nacional del Nordeste, Corrientes, Argentina

Pergamino, Argentina

§ Author for correspondence. Email: pedro.melendez@uga.edu

Supplementary Table 1. Analysis of maximum likelihood estimates for diseases in cows from 28 Argentinian dairy herds (n=16,815).

Hypocalcaemia

Parameter	Estimate	SEM	Chi-Square	P-value
Model G1 vs G2	-0.1	0.11	0.89	0.34
Season	-0.11	0.05	3.47	0.05
BCS at calving	-0.55	0.15	11.8	0.001
Model G1 vs G3	0.19	0.14	2	0.15
BCS at calving	-0.49	0.17	7.64	0.005
Model G1 vs G4	0.02	0.22	0.009	0.92
BCS at calving	-0.56	0.19	7.98	0.005

Retained Foetal Membranes

Parameter	Estimate	SEM	Chi-Square	P-value
Model G1 vs G2	-0.26	0.09	7.48	0.006
Farm	-0.07	0.01	49.3	0.0001
Model G1 vs G3	-0.16	0.11	2.15	0.14
Farm	-0.07	0.01	30.5	0.0001
Model G1 vs G4	-0.29	0.17	2.9	0.09
Farm	-0.07	0.01	22.8	0.0001

Metritis

Parameter	Estimate	SEM	Chi-Square	P-value
Model G1 vs G2	-0.38	0.12	9.88	0.001
Farm	-0.08	0.01	42.9	0.0001
BCS at calving	64	0.17	13.7	0.0002
Model G1 vs G3	0.18	0.15	1.4	0.23
Farm	-0.09	0.02	21.7	0.0001
Model G1 vs G4	-0.09	0.22	0.16	0.68
Farm	-0.07	0.02	13.6	0.0002
BCS at calving	0.55	0.23	5.46	0.01

Ketosis

Parameter	Estimate	SEM	Chi-Square	P-value
Model G1 vs G2	-0.28	0.17	2.67	0.1
Farm	-0.08	0.02	12.6	0.0004
Season	-0.26	0.09	8.09	0.004
BCS at calving	-0.79	0.23	10.9	0.001
Model G1 vs G3	-0.16	0.18	0.82	0.36
Farm	-0.09	0.02	12	0.0005
Season	-0.36	0.1	12.3	0.0005
BCS at calving	-0.94	0.25	13.9	0.0002
Model G1 vs G4	0.01	0.32	0.003	0.95
Farm	-0.11	0.03	12.3	0.0005
Season	-0.27	0.12	5	0.02
BCS at calving	-0.75	0.29	6.5	0.01

Mastitis

Parameter	Estimate	SEM	Chi-Square	P-value
Model G1 vs G2	-0.24	0.06	11.9	0.0006
Farm	-0.01	0.007	7.59	0.006
Model G1 vs G3	-0.07	0.08	0.93	0.33
Farm	-0.02	0.009	8.75	0.003
Model G1 vs G4	-0.21	0.12	2.94	0.08
Farm	-0.02	0.009	5.17	0.02

Culling/Death

Parameter	Estimate	SEM	Chi-Square	P-value
Model G1 vs G2	-0.14	0.07	3.73	0.05
Farm	0.04	0.007	35.1	0.0001
Season	-0.16	0.04	15.4	0.0001
Model G1 vs G3	-0.17	0.08	3.68	0.05
Farm	0.04	0.009	23.4	0.0001
Season	-0.16	0.04	10.9	0.0009
Model G1 vs G4	-0.41	0.13	9.47	0.002
Farm	0.04	0.01	18.6	0.0001
Season	-0.17	0.05	10.1	0.001

Lameness

Parameter	Estimate	SEM	Chi-Square	P-value
Model G1 vs G2	0.02	0.1	0.05	0.81
Farm	0.05	0.01	27.8	0.0001
BCS at calving	0.31	0.15	4.1	0.04
Model G1 vs G3	-0.05	0.12	0.15	0.69
Farm	0.06	0.01	24.8	0.0001
Model G1 vs G4	-0.11	0.19	0.34	0.55
Farm	0.05	0.01	16.2	0.0001