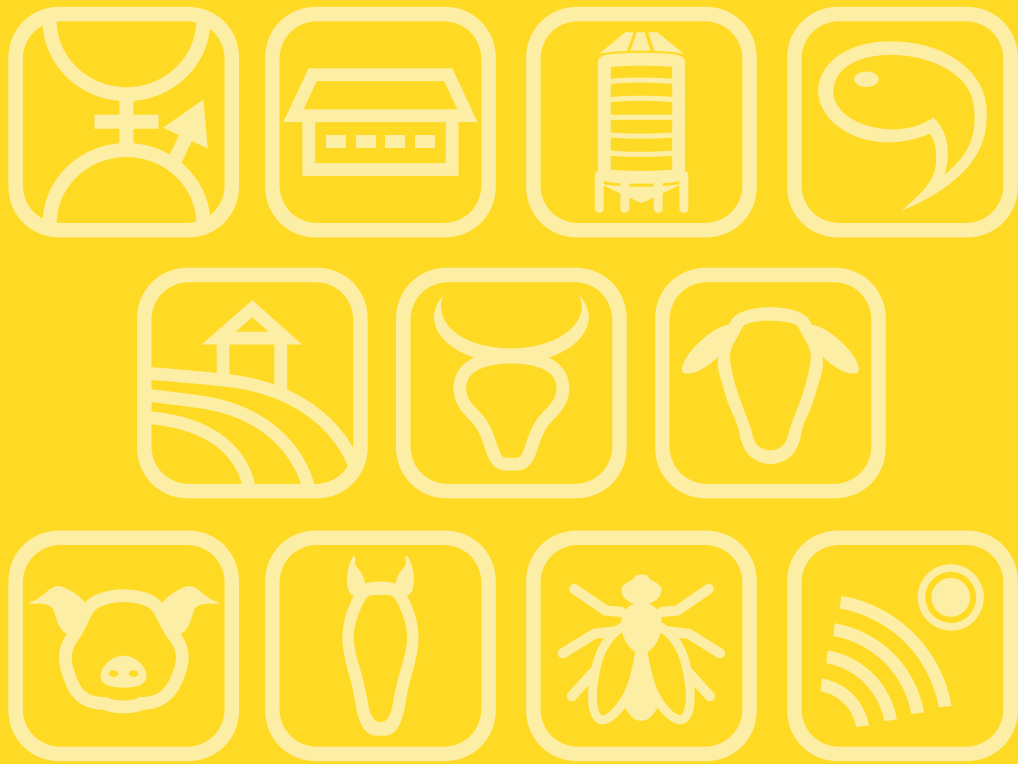


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Water Quality: Farmers' perception of the importance of the quantity and quality of water used for dairy cattle in Portugal

O. Moreira², J. Martins¹, R. Lucas¹, R. Branco³

¹ Universidade de Évora, MED, Pólo da Mitra, Ap. 94, 7002-554 Évora, Portugal, ² Instituto Nacional de Investigação Agrária, Quinta da Fonte Boa, Vale de Santarém, 2005-048 Santarém, Portugal, ³ Universidade Lusófona de Humanidades e Tecnologias, Campo Grande, 376, 1749-024 Lisboa, Portugal

Climate change affects livestock systems through direct impacts on the physiology, behavior, production and welfare of animals and indirectly through the availability, composition and quality of food and milk. The aim of this study is to ascertain whether dairy cattle farmers in Portugal (1) consider the issue of "water scarcity and quality" to be important on dairy cattle farms. Questionnaires were sent to dairy cattle farms in mainland Portugal. The farms (n=285) were selected based on their location, using the databases of the Portuguese Association of Friesian and the Dairy Cattle Support Station. The questionnaires aimed to collect information on (1) the importance of water attributed by producers; (2) water monitoring and storage; (3) production, reproduction and animal health; (4) verification of the latest analysis water report. The preliminary results of the questionnaires indicate that 51% of farms consider that water quantity alone is the most important factor on dairy farms; 98% of producers say that, in the context of climate change, water scarcity is very worrying; 91% of farms use their own water (borehole); 40% of farms do NOT carry out water quality analyses; 86% of farms do NOT monitor water consumption; 88% of farms do NOT carry out any kind of water treatment. The main problem found in the water analyses consulted was associated with microbiological quality (presence of *E. Coli* >0 NMP/100ml; intestinal enterococci > 0 cfu/100ml), followed by the presence of iron (>3mg/L), nitrates (>200 mg/L) and manganese (>4mg/L).

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Poster 33

Effect of pastures with rich tannin legumes on milk production and beef calves' performance

M. Lema¹, G. Fernandez-Turren¹, G. Bancharo², G. Quintans¹

¹ Instituto Nacional de Investigación Agropecuaria, Beef and Wool, Ruta 8 km 281, 33000 Treinta y Tres, Uruguay, ² Instituto Nacional de Investigación Agropecuaria, Beef and Wool, Ruta 50 km 11, 70006 La Estanzuela, Uruguay

The aim of this study was to evaluate cow's milk production (MP), and beef calves' performance grazing native improved pastures with a rich tannin legume (*Lotus subbiflorus*). Fifty-six Aberdeen Angus×Hereford multiparous suckling cows (LW 497±6.8 kg; BCS 4.05±0.04 units; Calf LW 60±1.6 kg) were assigned to each of two treatments on Day 22±0.82 postpartum: (i) native pasture (NP; n=28); (ii) native pastures improved with *Lotus subbiflorus* (improved pastures, IP, n=28). The forage allowance was 4.7 kg DM/kg LW in both treatments. The proportion of legume in IP was 27% with 3.6g/100 g DM of condensed tannins. Milk yield was assessed between onset of the experiment until Day 133 postpartum biweekly using a milking machine after oxytocin injection. The data were analyzed with the PROC MIXED of SAS (9.0; USA) with a model that included the fix effect of treatments. Cows LW was higher (P<0.05) in IP treatment respect to NP on Day 78 (546 vs. 523 kg, SEM=7.6) but not on Day 133 postpartum (551 vs. 539 kg for IP and NP respectively; SEM=7.8). Average MP (kg/d) was higher in IP than NP cows from Day 30 to 84 postpartum (12.3 vs 10.8, SEM=0.24; P<0.005) and from Day 84 to Day 140 postpartum (8.8 vs 7.7, SEM=0.31; P<0.05). Calves DLW between 22-78 days postpartum tended to be higher (P=0.057) in IP than in NP (1.13 vs 1.07 kg/d, SEM=0.02) but no differences were observed between 78-133 days postpartum between groups (1.08 vs 1.09 kg/d, SEM=0.24, for IP and NP respectively). Under grazing conditions, the incorporation of *Lotus subbiflorus* on native pastures is a nutritional and economical management strategy to increase postpartum beef herd performance.