



**FAWEC**

FARM ANIMAL  
WELFARE  
EDUCATION CENTER

## Evaluación del dolor en el ganado ovino

- AWIN, 2015. Welfare assessment protocol for sheep. DOI: 10.13130/AWIN\_SHEEP\_2015.
- Fitzpatrick J, Scott M, Nolan A, 2006. Assessment of pain and welfare in sheep *Small Ruminant Research* 62: 55-61.
- Gelasakis AI, Mavrogianni VS, Petridis IG, Vasileiou NGC, Fthenakis GC, 2015. Mastitis in sheep – The last 10 years and the future of research. *Veterinary Microbiology* 181: 136-146.
- Gougoulis DA, Kyriazakis I, Fthenakis GC, 2010. Diagnostic significance of behavior changes of sheep: A selected review. *Small Ruminant Research* 92: 52-56.
- Gregory NS, Harris AL, Robinson CR, Dougherty PM, Fuchs PN, Sluka KA, 2013. An overview of animal models of pain: disease models and outcome measures. *The Journal of Pain*, 14: 1255-1269.
- Kaler J, Medley GF, Grogono-Thomas R, Wellington EMH, Calvo-Bado LA, Wassink GJ, King EM, Moore LJ, Russell C, Green LE, 2010. Factors associated with changes of state of foot conformation and lameness in a flock of sheep. *Preventive Veterinary Medicine* 97: 237-244.
- Langford D J, Bailey A L, Chanda M L, Clarke S E, Drummond T E, Echols S, Glick S, Ingraio J, Klassen-Ross T, Lacroix-Fralish M L, Matsumiya L, Sorge R E, Sotocinal S G, Tabaka JM, Wong D, van den Maagdenberg A M J M, Ferrari M D, Craig K D, Mogil J S, 2010. Coding of facial expressions of pain in the laboratory mouse *Nature Methods* 7: 447–479.
- McLennan K M, Rebelo C J B, Corke M J, Holmes M A, Leach M C, Constantino-Casas F, 2016. Development of a facial expression scale using footrot and mastitis as models of pain in sheep *Applied Animal Behaviour Science* 176: 19-26.
- Molony V, Kent J E, McKendrick I J, 2002. Validation of a method for assessment of an acute pain in lambs. *Applied Animal Behaviour Science* 76: 215–238.
- National Research Council, 2009. *Recognition and Alleviation of Pain in Laboratory Animals*. Washington: The National Academies Press.
- Plummer PJ, Schleining JA, 2013. Assessment and Management of Pain in Small Ruminants and Camelids. *Veterinary Clinics of North America: Food Animal Practice* 29: 185-208.
- Stubsjøen SM, Flø AS, Moe RO, Janczak AM, Skjerve E, Valle PS, Zanella AJ, 2009. Exploring non-invasive methods to assess pain in sheep. *Physiology & Behavior* 98: 640-648.