"Mountains are agroecosystems for people"

eBook of Abstracts of the 1st Joint Conference of
EAAP Mountain Livestock Farming Working Group
& FAO-CIHEAM Mountain Pastures Sub-Network

Virtual meeting

Domžale - Slovenia, 7 – 9 June 2021

Scientific Committee of the Conference

- Giulio Cozzi, coordinator Mountain Livestock Farming across commission of EAAP
- Giampiero Lombardi, coordinator of FAO-CIHEAM MP
- Claudio Porqueddu, coordinator of FAO-CIHEAM Pasture and forage crops network
- Isabel Casasús, CITA-Aragón, Spain
- Alain Peeters, Rhea Environment, Belgium
- Margarita Joy, CITA-Aragón, Spain
- Daniel Villalba, Universitat de Lleida, Spain
- Manuel Schneider, Agroscope, Switzerland
- Massimiliano Probo, Agroscope, Switzerland
- René Baumont, INRA, France
- Bruno Martin, INRA, France
- Vibeke Lind, NIBIO, Norway
- Tzach Glasser, Ramat Hanadiv Nature Park, Israel
- Michele Lonati, University of Torino, Italy
- Grete H. M. Jørgensen, NIBIO, Norway
- Giovanni Peratoner, Laimburg, Italy
- Anna Zuliani, University of Udine, Italy
- Alberto Bernués, CITA-Aragón, Spain
- Matthias Gauly, University of Bozen-Bolzano, Italy
- Georgios Arsenos, Aristotle University of Thessaloniki, Greece
- Werner Zollitsch, BOKU University, Vienna, Austria
- Claire Morgan Davies, SRUC, Scotland, UK
- Øystein Holand, Norwegian University of Life Sciences, Norway
- Simone Ravetto Enri, University of Torino, Italy
- Peter Dovč, University of Ljubljana, Slovenia
- Karmen Erjavec, University of Novo mesto, Slovenia
- Matej Vidrih, University of Ljubljana, Slovenia
- Marija Klopčič, University of Ljubljana, Slovenia

Animal welfare assessment in alpine dairy farms with different housing systems

Partel E.[1], Lora I.[2], Scalet L.[2], Cozzi G.[2]

[1] *Technology Transfer Centre, Fondazione Edmund Mach, Via E. Mach 1, 38010, San Michele all'Adige (TN), Italy;* [2] *Department of Animal Medicine, Production and Health, University of Padova, Viale dell'Università 16, 35020, Legnaro (PD), Italy; erika.partel@fmach.it*

Keywords: dairy cow, mountain farm, welfare checklist, tie-stall, loose housing.

Introduction: The increasing awareness of consumers' towards the farm animal welfare issue has stimulated the different productive chains to certify the respect for minimum requirements on-farm. In Italy, a new method of farm classification based on resource- and animal-based measures of animal welfare and on management indicators has been developed and is under trial for different species. This assessment scheme, called "ClassyFarm", has been recognized as the reference method by the Italian Ministry of Health, and it is currently applied optionally in the dairy sector by several cheese factories. This study described the overall level of animal welfare and the main deficiencies assessed by the ClassyFarm checklist in 44 alpine dairy farms.

Materials and methods: A cheese factory of the Province of Trento (northern Italy) commissioned to a trained veterinarian a pre-assessment of the animal welfare status of its supplying dairy farms based on the ClassyFarm checklist. The aim was of both assessing the baseline welfare situation of its associate dairy farms and training the breeders on animal welfare requirements, preparing them for future official inspections. The ClassyFarm checklist, which was developed based on the Welfare Quality® protocol, is complex and differs in some specific items for farms with tie-stall (**TS**) or loose housing (**LH**) systems. Three main areas were assessed: "management and personnel", "facilities and equipment", and "animal-based measures". The first two areas included 13 (TS) to 17 (LH) and 14 (TS) to 18 (LH) resource-based measures, respectively, whereas the third area included 12 (TS) to 10 (LH) animal-based measures. Overall, 44 farms (30 TS and 14 LH) were inspected from November 2019 to February 2020. The herd size of TS farms ranged from 3 to 40 cows (13±9; mean±SD), whereas LH farms reared 25 to 42 (32±5; mean±SD) cows. Brown Swiss and Simmental were the main breeds reared and all farms provided access to pasture during the summer period for dairy cows.

Results: Overall, management indicators showed a good level of attention by farmers towards their animals in terms of skills, number of inspections per day and interaction with animals during routine handling. Resource-based measures showed that all the farms fulfilled the minimum law requirements for animal welfare and a share of them, ranging from 25 to 70%, provided comfort benefits above the minimum threshold. Some improvements would be needed about diet formulation of TS farms (27%) and comfort and cleanliness of the resting areas in both systems (TS and LH). The main critical points regarded either the absence or the poor management of the calving pen in LH farms (57%; item not included in the checklist for TS farms), and either the lack or the poor management of a dedicated infirmary area in both systems (63% of TS farms and 50% of LH). Only a small proportion of TS farms (<25%) had some deficiencies in the housing structures for calves. However, in line with the results from resource-based measures, the outcome of the animal-based measures was very satisfactory for both types of farms, with some improvements needed only about animal cleanliness, particularly for TS farms.

Conclusion: Farms showed an overall good level of animal welfare, with some deficiencies that can be easily fulfilled. Thinking to a broad application of this welfare assessment scheme in the mountain areas, the main deficiencies are supposed to target farms with limited availability of indoor space. Because space allowance is the main constrain for alpine farms, specific solutions should be studied to overcome the need for expensive housing rearrangements or new building construction. Moreover, the results highlighted that small-scale farms would need a simplified checklist, as several managerial and resource-based items included in the assessment were found to be not sensible in farms with less than 10–15 cows.