ON FARM ASSESSMENT OF SHEEP WELFARE: INTER-OBSERVER RELIABILITY OF SOME ANIMAL RELATED VARIABLES

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Intensive sheep farming systems have recently spread through the northern countries of the Mediterranean basin and specialized dairy flocks have increased in size, potentially reducing the welfare of animals. As no on-farm assessment protocol is currently available, the development of a monitoring scheme for sheep is needed.

In the present study the inter-observer reliability of some animal related indicators, which have been reported to be relevant to sheep welfare, was evaluated using the Spearman's coefficient of correlation (r_s). The following variables were recorded: animal dirtiness (major splashing or distinct plaques of dirt at hind quarters and udder) as indicator of animal comfort, lameness (any sign of abnormal gait) giving information on housing and management, lesions (swellings, wounds and scabs), hoof overgrowth (at least one overgrown claw) and integument alterations (skin damages due to ectoparasites, wool-less patches, hyperkeratosis) indicating damages received by the animals. Parameters were scored on the basis of their prevalence (number of affected animals/number of observed animals). Two trained observers performed assessments in forty sheep dairy farms on at least 20% of lactating animals.

A significant correlation between observers was observed for all parameters ($P<0.001$), apart from lesions ($P>0.10$). Integument alterations ($r_s=0.85$), hoof overgrowth ($r_s=0.82$), lameness ($r_s=0.81$) and dirtiness ($r_s=0.84$) showed coefficients higher than 0.7, whereas it was much lower for lesions ($r_s=0.22$). This latter result may be due to the fact that lesions were often small and hidden by the fleece. The problem could be approached by monitoring only wide and evident lesions, while observers should also perform more training.

Although more studies are needed to test the validity (meaningfulness with respect to animal welfare) of these variables in sheep, most of them proved to be reliable, thus representing a preliminary list of candidate parameters to be included in a scheme for on-farm assessment of sheep welfare.