

How can the seasonal climate changes influence horse's health and welfare in the extensive farming system?

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Keeping horses in marginal areas may trigger a transition towards more sustainable animal husbandry practices, resulting in favorable outcomes for the environment and animal welfare. The present study aims to describe how welfare and health condition of horses kept in marginal areas can be influenced by environmental and climatic conditions. A total of 90 horses (13,1±0,27 years) were recruited from seven stables in Italian marginal areas. The AWIN welfare assessment protocol was applied by two trained observers to monitor horses' welfare in summer and winter. The proportion of each score of animal-based indicators were calculated. During the winter, the percentage of horses with a suboptimal body condition score was slightly higher (62.9 %) compared to the summer (59.3 %). Altered hair coat condition (17.2 %) and cough presence (1.1%) were higher in the winter with, respectively, 9.9 % and 0 % in the summer. However, alopecia (19.7%), skin lesions (10.9%) and swollen joints (11.7%) were higher in the summer, while in winter they were 4.5 %, 4.5% and 4.8% respectively. Human-horse relationship was similar in summer and winter with over 80% of horses showing positive signs when approached by humans. The results suggest that different climatic conditions can affect the health of horses kept in marginal areas, thus affecting their welfare. Further data collection should aim to enlarge the time frame of monitoring, allowing a more comprehensive evaluation of the impact of different climate conditions on horse welfare.