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**Book of Abstracts**

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popularity and economic interest. In this field, mechanization of milking procedures represents an important innovation in donkey milk production. The aim of the work is to evaluate if a habituation protocol for dairy donkeys to the milking parlor procedures could be useful to reduce animal stress.

Sixty lactating dairy donkey jennies ( $97 \pm 45$  days in milk) were divided in three groups of 20 heads for each, homogeneous for age, parity and days in milk. All the animals were never subjected to mechanical milking procedures and never entered the milking parlor. Groups A and B were subject to different habituation protocols that lasted 9 days. These two groups had, then, 6 days of mechanical milking. Group C (negative control) was directly mechanically milked for 6 days. For the first 3 days, both groups A and B passed through the switched-off milking parlor. In the next 6 days donkeys in the group A received a “more gentle treatment” passing for 2 days through the switched-on milking parlor and for 4 days stopping in the milking stall. Group B, instead, was stopped in the milking stall during all 6 days, and their udders were neared to the switched-on milking cluster. Behavioral patterns and heart rate were measured during each session. Data obtained were submitted to 2-way ANOVA using the general linear model. Groups were then analyzed separately considering as fixed effect the milking session and applying the Tukey's test for repeated measures. Significance was set as  $p < .05$ .

Donkeys that received the pre-milking habituation handling (groups A and B) showed less reactive behaviors (kicks and steps) and incoming stops when the milking procedures started if compared to the C group ( $p < .01$ ). Differences in heart rate were observed during the milking procedures between C group and other ones ( $p < .05$ ). Milk production was greatly affected by pre-milking treatment. Group B showed a greater milk production at the first milking session ( $p < .01$ ). From the second milking session, group C, without any pre-milking habituation period, showed lower milk production ( $p < .01$ ). This suggests that the pre-milking habituation protocol providing a rapid contact with the milking cluster can result in a better response of animals with lower reactions behaviors, lower heart rate variation and higher milk production.

## O041

### Outcomes of a web-survey for collecting stakeholders' opinion on welfare requirements for sheep, goats, turkeys, donkeys, and horses

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The Animal Welfare Indicators (AWIN) project aimed at developing animal-based welfare assessment protocols for sheep, goats, turkeys, donkeys, and horses. To assure a good acceptance of the protocols, during the early stages of the project stakeholders were invited to participate in a multi-language web-survey, made available online for 15 months on the web-sites of several academic and international organisations. Participants answered open questions about appropriate requirements to guarantee high levels of animal welfare on farm. A total of 271 surveys were properly filled out (123 for horses, 81 for sheep, 36 for goats, 18 for turkeys and only 13 for donkeys). Answers came from 32 countries distributed in Europe (70.4% of respondents, among which 44.5% from Italy), America (16.2%; e.g. from United States, Canada, Chile, Colombia), Oceania (9.23%; e.g. from Australia, New Zealand), Asia (2.6%; e.g. from India, Vietnam), and Africa (1.5%; e.g. from Ghana, Lesotho). Gender of participants was balanced in all species, except for horses (85% women). Most of the participants (77%) aged between 31 and 60 years. Questionnaires on sheep and turkeys were compiled mainly by veterinarians, whereas questionnaires on goats and donkeys by farmers, on horses by owners. Text analysis was used to count the occurrence of the words used by the stakeholders and to assess the most prevalent ones. The term feeding was the most frequently used to describe welfare requirements (86.49% of goats' responses, 76.92% of donkeys, 74.39% of sheep, 66.67% of turkeys and 60.2% of horses). Specific terms were used for each species: protection from predators for goats and sheep (8.11% and 12.20% of responses, respectively), genetic for turkeys (11.11%), regular exercise for horses (27.6%), foot care for donkeys (30.77%).

The interest raised by the survey was below expectations. One reason could be that the distribution was insufficient or inappropriate: stakeholders from countries involved in the AWIN project were more engaged compared to other countries. Another possible explanation could be internet availability, which may represent a further limit in some geographic areas (e.g. developing countries). Finally, the characteristics of human-animal relationship seem to have played a role in stakeholders' involvement: horses, characterized by a stronger relationship, received the highest number of answers, whereas turkeys (high number of animals/farm, less strict human-animal relationship) received less answers.

The results showed that stakeholders' involvement, while crucial, would be susceptible to certain biases that need to be taken into account when conceiving and distributing a web-survey.

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