

1 **Validation of a noseband pressure sensor algorithm as a tool for evaluation of feeding**
2 **behaviour in dairy Mediterranean buffalo (*Bubalus Bubalis*)**

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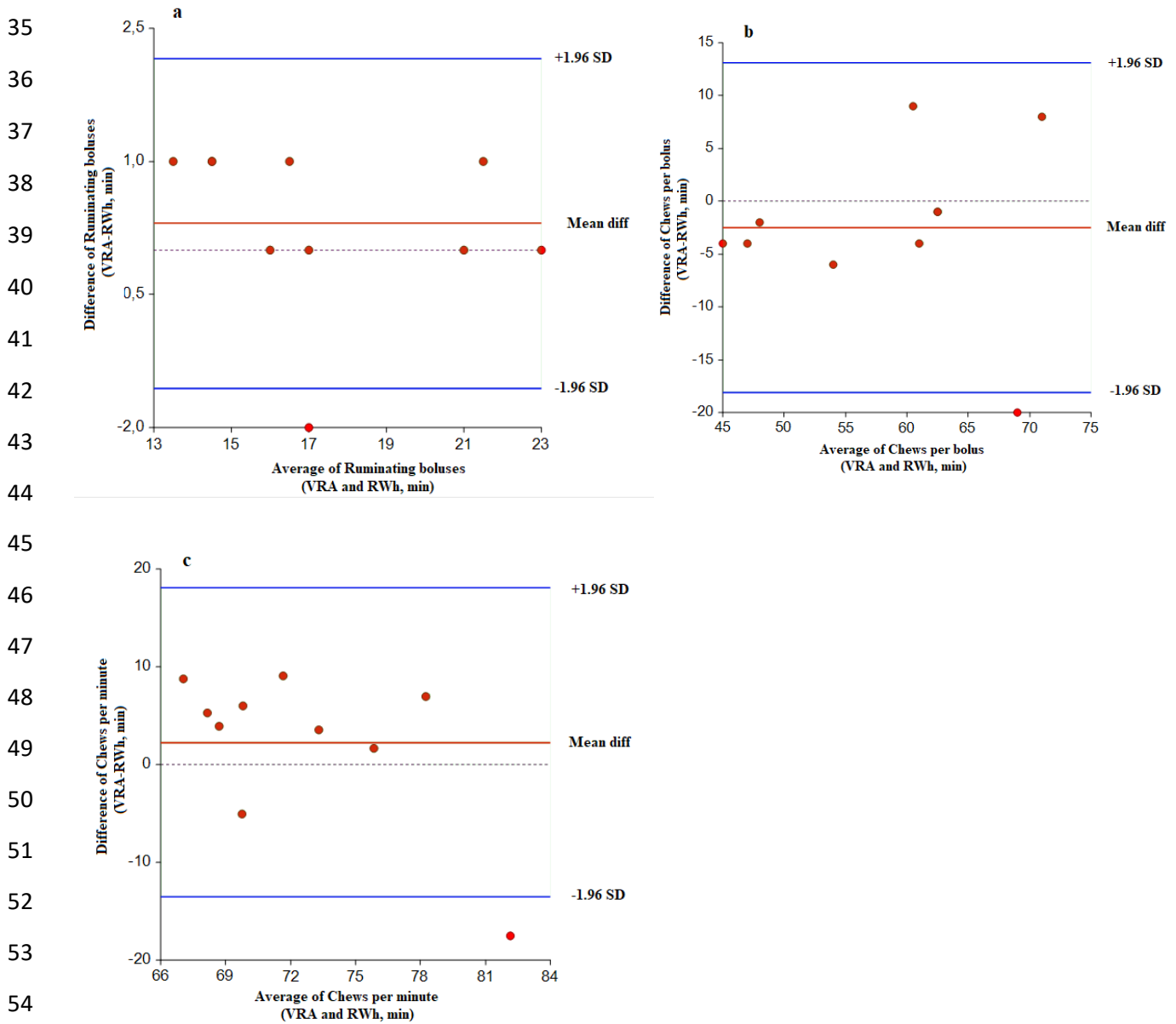
25 **Table a.** Definitions used to describe five variables of feeding behaviour of 10 primiparus dairy
26 Mediterranean buffaloes, including *rumination time*, *eating time*, *ruminating boluses*, *chews per bolus*,
27 *chews per minute*

Parameters	Definitions
<i>Rumination time</i>	Time spent chewing and swallowing of ruminating boluses
<i>Eating time</i>	Time spent intake, chewing, and swallowing of feed
<i>Ruminating boluses</i>	Number of ruminating boluses regurgitated per 1200 seconds
<i>Chews per bolus</i>	Number of ruminating chews per bolus
<i>Chews per minute</i>	Number of chews per minute of rumination

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30 **Figure a.** Bland-Altman plots comparing RumiWatch® halter outputs (ITIN+HOCH GmbH, Liestal,
 31 Switzerland) and video recording analysis (gold standard) in 10 primiparus dairy Mediterranean buffaloes.
 32 Graph “a” shows “*ruminating boluses*”, while “b” and “c” represent “*chews per bolus*” and “*chews per*
 33 *minute*”, respectively (all of them evaluated during a period of 1200 seconds). Each point refers to the value
 34 derived from one individual buffalo.

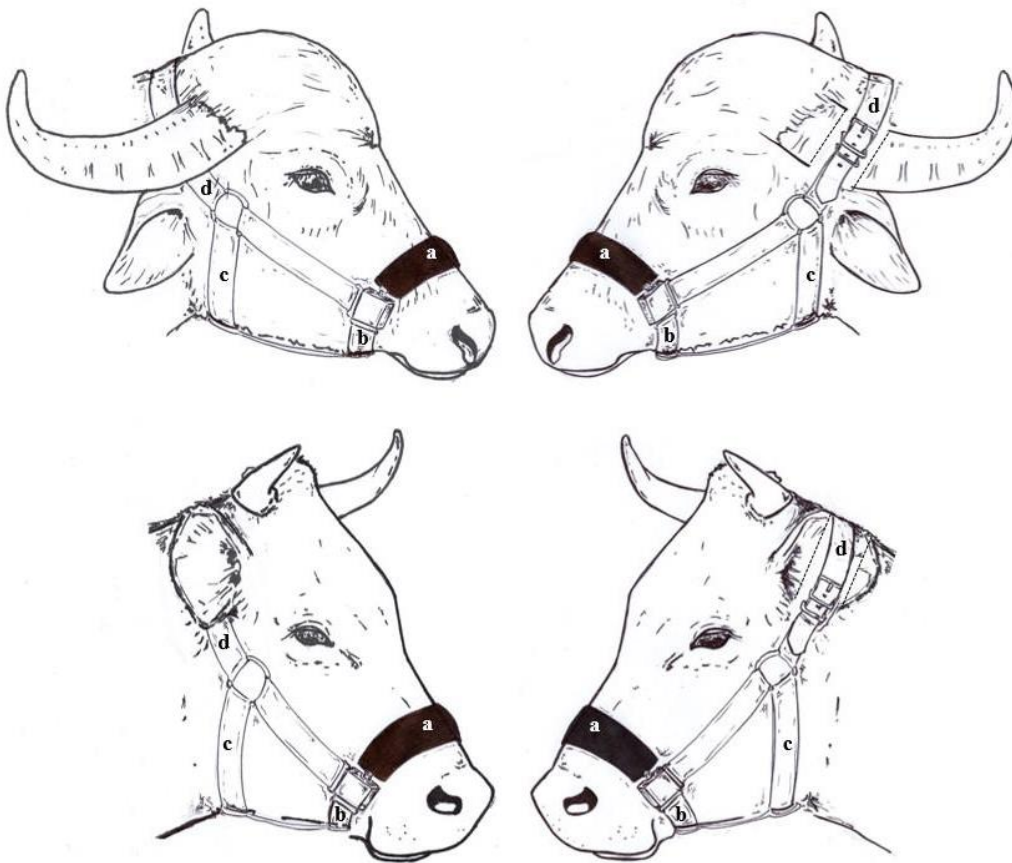


65 RWh = RumiWatch® halter; VRA = Video Recording Analysis.

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59 **Figure b.** Graphic comparative representation of Mediterranean buffalo (MB) and cow's head. a = 1° half
60 of the noseband (nosepiece) including the noseband sensor; b= 2° part of the noseband (chinpiece);
61 c=throatlatch; d=crownpiece and buckle. Part "a" and "b" as well as "c" and "d" were all too small for the
62 dimensions of the head of adult MBs; instead "a" and "b" were too long for the primiparous MB. The
63 impossibility to perfectly adjust the instrument to the muzzle of these animals, shortening of the length of
64 noseband as needed (a and b piece) was considered most likely the cause of the problem in primiparous MB
65 reported in the manuscript. A further difficulty was represented by the position of the crownpiece (d piece)
66 due to the presence of the horn in close vicinity to the buckle.



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