

# MATERNAL INVESTMENT AND REPRODUCTION STRATEGY IN THE DOMESTIC HORSES (*EQUUS CABALLUS*)

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## ABSTRACT

Suckling, the main part of maternal investment in equids, is crucial for development and social success of the foal. As such it is of great importance in horse breeding. We examined effects of: age and sex of the foal, age, parity, pregnancy and rank of the mother and sex of the foetus if the mother was pregnant. Further the degree of inbreeding of each mare was added. Four variables describing suckling behaviour were modelled: suckling duration and frequency, proportion of suckling attempts rejected and terminated by the mother and suckling terminated by another mare. Behavioural observations were conducted at the National Stud Kladruby nad Labem. Eight groups of loose housed mares with foals were observed from deliveries to abrupt weaning. The value of the inbreeding index was taken from the stud records. In total, we recorded 10 607 suckling solicitations of 79 foals from 59 mothers. Probability that mother reject the suckling bout was influenced by interaction between foal's age and its sex ( $P < 0.05$ ). A mother terminated suckling bouts to her foal with lower probability as a nursed foal matured ( $P < 0.0001$ ), no matter of its sex, but mares with female foetuses tended to terminate suckling bouts more often than non-pregnant ones or those bearing males ( $P = 0.05$ ). Suckling bouts terminated by a mother were shorter when she was not pregnant compared to those bearing either male or female foetuses. Mares who frequently terminated suckling bouts to their herdmates were higher ranked ( $P < 0.05$ ) and pregnant ( $P < 0.001$ ). Suckling bouts duration decreased as the foal matured ( $P < 0.0001$ ), it increased with higher dominance rank of the mother ( $P < 0.01$ ) and differed also among groups ( $P < 0.01$ ). Any of analyzed variables except the suckling attempts rejected by the mother was affected by the degree of inbreeding. Mothers rejected suckling attempts the more, the less inbred they were ( $P < 0.02$ ). The termination of suckling bouts could serve the mares for different allocating their resources with respect to their concurrent investment in two offspring when being pregnant during lactation, while rejection of suckling solicitation rather reflected different approach to maternal care provided either to male or female foals. In conclusion, in loose housed mares of domestic horse with foals we have found no detrimental effect of any of literally cited factors on suckling behaviour.

**Key words:** horse, suckling, inbreeding, dominance, pregnancy

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