

Do nervous cows produce more milk?



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BACKGROUND: Variation in personality¹ is predicted to be related to life-history traits, such as investment in reproduction². How this translates into relationships between personality and milk production is scarcely investigated, and previous studies of dairy cows show contradicting results^{3,4}.

AIM: to investigate links between personality and milk production in two breeds of dairy cows.

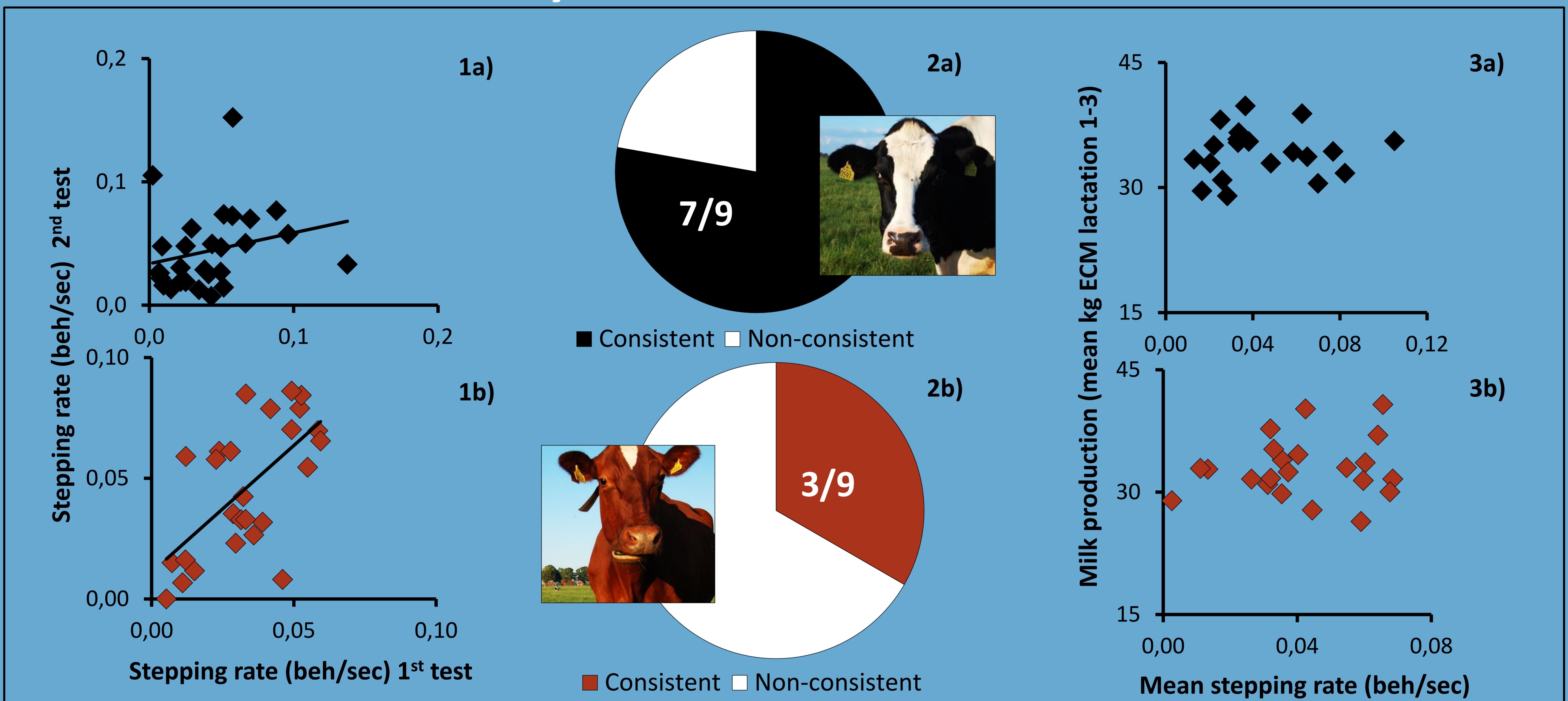


Fig 1. Cows were consistently nervous (stepping behaviour during milking); (a) Holstein ($r=0.37$; $p=0.03$; $n=28$) and (b) SRB ($r=0.56$; $p<0.01$; $n=26$).

Fig 2. (a) Holstein cows showed more consistent behaviours than (b) SRB.

Fig 3. Personality did not correlate with milk production; (a) Holstein ($r=0.16$; $p<0.43$; $n=27$) and (b) SRB ($r=0.0.16$; $p<0.45$; $n=24$).

RESULTS: Cows are consistent in a range of behaviours⁵ (e.g. Fig 1), however, Holstein cows were consistent in more behaviours than Swedish Red and Brown cows (SRB)⁵ (Fig 2). Nevertheless, in both breeds, cow personality showed limited relationship with milk production⁵ (e.g. Fig 3).

CONCLUSIONS:

- Breeds differ in number of consistent behaviour i.e. in how 'much' personality they have, and
- Personality is not linked to production, thus more studies are needed on the predictions of this relationship



REFERENCES: 1. Sih et al 2004; 2. Wolf et al 2007; 3. Breuer et al 2000; 4. Purcell et al 1988; 5. Hedlund 2013 MSc Thesis

METHODS: 4 tests (9 behaviours) were conducted on 2 breeds of dairy cows (Holstein and Swedish Red and Brown, SRB): 1) behaviour in milking parlour, 2) exposure to novel stimuli, 3) social separation, and 4) abnormal behaviours in home pen. Tests were repeated after 8 weeks to measure consistency over time. Behaviours were correlated to production values (kg milk, kg ECM) from the cows' current, 1st, 2nd, and 3rd lactation.