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Development of test for determining olfactory investigation of complex odours in cattle

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Highlights:

- The first habituation/dishabituation test adapted for and applied to cattle
- Cows and heifers can distinguish between different complex odours (coffee and orange juice) and both showed increased interest for one of the odours (coffee)
- A new potential to use odours when adapting or enriching the environment in which we keep cattle?

Abstract

The sense of smell is likely to influence the behaviour of domestic and captive animals in a wide range of management and housing situations. In domestic cattle, there may be unexploited potential for using odours and olfaction in the management; however, published studies on bovine olfactory capacity are scarce. By applying an olfactory Habituation/Dishabituation test developed for rodents, this study aimed to assess olfactory ability in cattle. Twenty-three cows (n = 10) and heifers (n = 13) were tested with three different odours (orange juice, liquid coffee and tap water as an odourless control) presented in a test bucket. The test was conducted on

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