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The efficacy of novel rope flavours as environmental enrichment for stalled gilts

JD Colpoys^{*†}, AK Johnson[‡] and NK Gabler[‡]

[†] Department of Agricultural Science, Truman State University, Kirksville, MO 63501, USA

[‡] Department of Animal Science, Iowa State University, Ames, IA 50011, USA

* Contact for correspondence and requests for reprints: jcolpoys@truman.edu

Abstract

*The objective of this study was to evaluate the use of flavoured ropes as environmental enrichment for individually housed pigs (*Sus scrofa*). A 4 × 4 Latin square experimental design was utilised to evaluate the effects of four rope flavour treatments on 24 individually penned gilts: i) water; ii) salt water solution; iii) sugar water solution; and iv) apple juice. Cotton rope was soaked in the assigned treatment solution for 30 min on day 1 of each treatment. The rope was tied to an overhead bar at 1000h on day 1 and removed at 1900h on day 2. The following day, gilts received a different treatment using the same methodology. Gilts were video-recorded one day before treatments were given (baseline) and throughout the study. The video was analysed for enrichment interaction, eating behaviour, and posture using a 2-min scan sample interval between 0700 and 1900h. The addition of sugar flavour increased enrichment interaction compared to apple and salt flavours but did not differ compared to water treatment. Furthermore, gilts interacted with enrichment 61% more the first day the enrichment flavour treatment was provided compared to the second. Gilts given rope enrichment spent less time lying and more time sitting compared to when no enrichment was provided. The results of this study suggest that while the addition of flavours to cotton ropes caused minor changes in enrichment interaction and behaviour, provision of rope enrichment was beneficial for increasing activity in stalled gilts.*

Keywords: animal welfare, behaviour, environmental enrichment, feed intake, flavour, pig