

ANIMAL WELFARE

Title: Is tail docking necessary and if so, how long should the tail be? – **NPB #06-183**

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Scientific Abstract

Tail docking of piglets is a routine procedure on farms to control tail biting behavior, however docking can cause an acute stress response. The objectives of this research were to 1) determine if tail docking prevents tail biting behavior in pigs, 2) determine if different methods of tail docking influence the prevalence of tail biting and reduce the stress caused by tail docking, 3) evaluate different methods of analgesia on the pain response in pigs to tail docking. In experiment 1, piglets were either tail docked using hot cautery iron (CAUT), blunt trauma cutters (BT), or their tails were left intact (CON). Blood samples were taken from pigs at 3 and 7 weeks of age to measure C-reactive protein (CRP). Tail biting lesions were scored at 3, 5, and 7 weeks of age. Behavior was recorded for 72 hours when tail biting was observed in 7 week old pigs. Tail biting lesion scores were similar among treatments at 3 and 5 weeks of age, however at 7 weeks of age lesion scores were greater among CON compared with CAUT and BT pigs. Body weights were lower among CON compared with CAUT or BT pigs and CRP was elevated among CON compared with CAUT and BT pigs at 7 weeks of age. In experiment 2, piglets were tail docked at a length of 2 cm (Short) or 5 cm (Long). Tail biting lesions were scored every 2 weeks until the end of finishing. Tail biting lesion scores were greater among Long compared with Short pigs. In experiment 3, pigs were tail docked using conventional cutting (CUT), cautery (CAUT), conventional cutting while the pig was anesthetized with carbon dioxide gas (CO₂), conventional cutting with local anesthetic administered immediately prior to cutting (LA), conventional cutting with short acting topical anesthetic administered immediately after cutting (SHORT), conventional cutting with long acting topical anesthetic administered immediately after cutting (LONG), or sham docked (CON). Sequential blood samples were collected to measure cortisol concentrations and leukocyte measures. Behavior was also measured using 1-scan samples. Cortisol concentrations were reduced in pig's tail docked using cutting when a short acting topical anesthetic was applied to the wound. None of the other methods of analgesia were effective at reducing the cortisol response to tail docking in pigs, including using carbon dioxide as a form of general anesthesia. Pig's tail docked without analgesia performed a higher percentage of lying-alone behavior compared with all other treatments. Body weight change and wound healing was not affected by tail docking treatment. Poor welfare of tail bitten pigs was indicated by severity of lesion, level of CRP, and reduced pig body weights. Until root causes of tail biting are understood and preventative measures adopted, the long term benefits of tail docking outweigh the acute stress caused by this procedure. More research is needed to find effective analgesic treatments that could reduce the distress caused by tail docking to the pigs and which are practical on-farm.

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