RESEARCH ABSTRACT

ANIMAL WELFARE

Title: What is the optimum age for processing neonatal pigs? – **NPB #06-026**

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Scientific Abstract

Multiple producer groups recommend that piglets be tail docked and ear notched within 24 hours of birth because the procedures are considered less stressful for the piglet at that age. However, there is no research to substantiate this recommendation. Therefore, the objective of this experiment is to compare the effects of processing during the first 24 hours versus 3 days of age on piglet suckling behavior, immune and endocrine status and growth. Six piglets per litter from 20 litters (n=120 piglets) were used in a 3 x 2 complete block design. Each litter comprised a complete block. Piglets were weighed at birth and assigned to one of three treatments (balanced by birth weight): control (C), sham processed (S) and processed (P) (tail docked and ear notched) at one of two ages (1 or 3 days). Vocalizations were recorded during treatment, and piglet behavior was observed immediately after treatment for pain-related behavior. Suckling behavior was observed for six hours on each of days 1-4. Blood samples were collected on day 5 to examine levels of immunoglobulins (IgA and IgG) and insulin-like growth factor-I (IGF-I). Piglet weights were measured at birth and on days 5 and 14. P piglets vocalized at a higher frequency than S piglets ($P<0.0001$), and produced more high frequency calls than S piglets ($P=0.0157$). Piglets on day 1 produced more high frequency calls than those on day 3 ($P=0.0467$). Immediately after treatment, S and P piglets spent less time lying and more time standing than C piglets ($P<0.001$), while P piglets jammed their tail between their legs more than S or C piglets ($P=0.0005$). Day 1 piglets trembled significantly more than day 3 piglets ($P=0.0005$), and this was exacerbated by processing ($P=0.076$). Processing tended to influence IgG, with piglets processed on day 3 having lower plasma IgG concentrations than those processed on day 1. There were no differences between treatments or days of treatment in suckling behavior, weights, growth rates, IGF-I, or IgA concentrations. While tail docking and ear notching does appear to result in short-term pain and distress, there were no consistent differences between days of treatments, and processing on day 1 appears neither better nor worse than processing on day 3.