Normal Profiles for Dental Eruption in Commercial Swine From 0 to 35 Days of Age

Anita L. Tucker a, Robert M. Friendship b, Suzanne T. Millman b, c & Tina M. Widowski a

a Department of Animal and Poultry Science, Ontario Agricultural College, University of Guelph, Guelph, Ontario, Canada
b Department of Population Medicine, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada
c Veterinary Diagnostic and Production Animal Medicine, and Biomedical Sciences Departments, Iowa State University, Ames

Published online: 24 Mar 2009.


To link to this article: http://dx.doi.org/10.1080/10888700902720649

PLEASE SCROLL DOWN FOR ARTICLE
promoted. Beef cattle welfare practices are imperative for improved production, safety of animals and agricultural workers, and improved consumer acceptance. Consumers need to understand how imperative agriculture and beef production is to the country’s economic survival.

Normal Profiles for Dental Eruption in Commercial Swine From 0 to 35 Days of Age

Anita L. Tucker,1 Robert M. Friendship,2 Suzanne T. Millman,2,3 and Tina M. Widowski1

1Department of Animal and Poultry Science, Ontario Agricultural College, University of Guelph, Guelph, Ontario, Canada
2Department of Population Medicine, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada
3Veterinary Diagnostic and Production Animal Medicine, and Biomedical Sciences Departments, Iowa State University, Ames

Deciduous dental eruption in commercial pigs was last examined in 1973; therefore, standard profiles for the “modern” pig do not exist. Recently, molar eruption has been shown to influence the amount of time piglets spend at the feeder, making timing of dental eruption of particular interest.

The purpose of this study was to determine when teeth erupt in piglets 0–35 days of age and to identify sow, litter, and piglet factors that may be influential.

A total of 233 Yorkshire piglets (24 litters) were given dental exams at ages 2, 6, 9, 13, 16, 21, 24, 27, and 35 days. Birth and weekly weights were recorded as were gender, sow parity, numbers of live-born piglets, stillborns, mummies, and male/female ratio.

Mixed model analyses of variance (SAS, Version 9.1) were employed to test how these factors influence tooth emergence. Sequence of eruption was i1, p3, p4, i1, p3, p4 (i = incisor, p = premolar, subscript = mandible, superscript = maxilla). Age (in days) of eruption were i1 (gilts: 4.64 ± 0.15, barrows: 5.22 ± 0.19), p3 (gilts: 5.60 ± 0.25, barrows: 6.41 ± 0.25), p4 (gilts: 6.68 ± 0.32,
barrows: 7.72 ± 0.30, \( i_1 \) (gilts: 9.32 ± 0.52, barrows: 9.98 ± 0.51), \( p_3 \) (gilts: 19.15 ± 0.42, barrows: 19.55 ± 0.38), \( p_4 \) (gilts: 29.93 ± 0.56, barrows: 24.94 ± 0.54). Factors influencing eruption time were gender (sooner in gilts: \( p_3, p = .0011; p_4, p = .0057; p_4, p = .0072; i_1, p = .0045 \)), birth weight (heavier piglets having earlier eruption: \( i_1, p < .0001; p_3, p < .0001; p_3, p = .0002; p_4, p = .0015; p_4, p < .0001 \)), Week 1 average daily gain (ADG) (higher gaining piglets having earlier eruption: \( p_3, p = .0064; p_4, p = .0010; i_1, p = .0014 \)), Week 2 ADG (\( p_4, p = .0358 \)), and sow parity (higher parity sows having piglets with earlier eruption of \( i_1, p = .0131 \)). This study demonstrates eruption times are highly variable and can be influenced.

The Performance and Behavior of Early-Weaned Piglets Following Transport: Effect of Weaning Weight

Steinar Wamnes, Nora J. Lewis, and Robert J. Berry
Department of Animal Science, University of Manitoba, Winnipeg, Manitoba, Canada

Two groups of 48 Cotswold piglets were weaned at 17 ± 1 day of age and assigned to road or simulated transport during summer or winter. Following transport (0, 6, 12, or 24 hr), piglets were grouped in pens of 4 individuals of similar weight, producing pens of relative light (5.26 ± 0.72 kg), medium (6.19 ± 0.7 kg), and heavy (7.4 ± 1.07 kg) pigs. Body weights were recorded on Days 1–8, 10, 12, and 14; piglet behavior was recorded on Days 1–4, 7, and 14 postweaning and transport. Across season and transport treatment, heavy piglets continued to lose weight longer relative to light piglets (2.26 days vs. 1.7 days, \( p < .02 \)). The average daily gain between day of recovery and Day 14 posttransport was higher for light (6.14%) and medium (6.1%) than for heavy piglets (5.05%, \( p < .01 \)). Light piglets also showed better feed conversion efficiency compared with heavy piglets (0.94 vs. 0.90, \( p < .05 \)) during the first 14 days following weaning and transport.

Steinar Wamnes and Robert J. Berry are now with Manitoba Agriculture, Food and Rural Initiatives (MAFRI). Nora J. Lewis passed away in December 2008.
Correspondence should be sent to Steinar Wamnes, Manitoba Agriculture, Food and Rural Initiatives (MAFRI), Manitoba, Canada. Email: steinar.wamnes@gov.mb.ca