

more likely to occur after a DEV occurred the previous day than after a day with adequate intake for purebred and F1 sows, respectively. A DEV was 3.1 ($P < 0.05$) times more likely to occur during late lactation when a DEV had occurred previously in early lactation in F1 sows. Negative deviations from predicted LFI values significantly decreased reproductive performance, increased the likelihood of multiple DEV occurring during lactation, and had larger effect on performance when they occurred during late lactation.

Key Words: feed intake, lactation, studentized residual

O207 Feed efficiency of swine—A survey of current knowledge. J. Flohr^{1,*}, M. D. Tokach¹, J. L. Nelssen¹, S. S. Dritz¹, J. M. DeRouchey¹, R. D. Goodband¹, J. F. Patience², ¹*Kansas State University, Manhattan*, ²*Iowa State University, Ames*.

Pork producers and advisers to the swine industry were surveyed about their knowledge of feed efficiency. The questionnaire had 3 objectives: 1) determine the knowledge level related to feed efficiency topics; 2) identify production practices being used that influence feed efficiency, and 3) identify information gaps or areas requiring more research to further improve feed efficiency. A web based survey with 32 knowledge, production, and discovery questions were asked. Demographic questions were used to categorize respondents by industry segment (producer, consultant, academia, or other), and years of experience (0 to 5, 5 to 10, 10 to 20, and 20 or more). Six knowledge questions about the effects of fat inclusion, particle size, pelleting, temperature, feed additives, and sow feed usage on feed efficiency were asked. Answers were categorized as correct (46%), incorrect (28%), or not sure (26%). Further categorizations of these responses are listed below. Overall, results suggest there are gaps in the knowledge about practices that affect feed efficiency. Consultants were the only industry segment who averaged more than 50% correct responses to knowledge questions. As years of industry experience increased correct answer percentage also increased. Knowledge needs varied by industry segment with producer responses indicating that they need more information on the effects of fat inclusion, particle size, feed additives, and temperature on feed efficiency. These results will help extension educators inform specific industry segments with current information and provide for more specific areas of future research where information gaps have now been identified.

Industry Segment	Producers	Consultants	Academia	Other
Correct	42%	58%	35%	32%
Incorrect	23%	30%	35%	32%
Not sure	35%	12%	30%	36%
Years of Experience	0 to 5	5 to 10	10 to 20	20 or more
Correct	37%	39%	41%	48%
Incorrect	17%	28%	29%	33%
Not sure	47%	34%	30%	19%

Key Words: feed efficiency, survey, swine

O208 Production performance factor analysis of commercial swine operations. C. Abell^{1,*}, J. Mabry¹, C. Hostetler², K. Stalder¹, ¹*Iowa State University, Ames*, ²*National Pork Board, Clive*.

The objective of this study was to determine the factors that explain the variation in production performance between commercial swine

operations. The data used for this study was collected from October 2005 through December 2011 from U.S. sow, nursery, and finishing farms. Monthly, averaged company-wide records from over 50 companies were included with an average of over 40 records per company. Different performance indicators were analyzed for each segment of the production system. A factor analysis was conducted to identify production indicators that explain greatest proportion of the variation in production performance between the different companies. The factors evaluated for sow farm production were measurements of sow feed intake, piglet and sow mortality, litter size, and sow productivity. The nursery and finisher factors were mortality, exit weight, daily gain, feed conversion ratio, and days in the barn for the respective production system stage. The top three factors from the factor analysis for each production stagewere used to explain the overall variation in each production stage. These three factors explained 50% of the sow farm, 74% of nursery, and 72% of finisher variation. The first factor for the sow farm was dominated by number born alive, total born, and pigs/sow/year. Sow intake controlled the second factor. The third factor was not as dominated by a specific set of production indicators, but litters/sow/year was the indicator with the largest weighting. For the nursery data, exit age and nursery days were given the highest weighting in the first factor, daily gain and start age were given the highest weightings in the second and third factors, respectively. Total gain and exit weight were given moderately high weighting in both the first and second factors. A similar result was found for the finisher data. Finishing age and days at the finisher dominated the first factor, and total gain and finish weight controlled the second factor. Start age was the highest weighted production indicator in the third factor. Identifying production indicators that are most variable between swine operations can allow producers to focus on certain factors to improve their productivity.

Key Words: factor analysis, performance, swine

NONRUMINANT NUTRITION: GROWING-FINISHING NUTRITION AND MANAGEMENT

O215 Effects of pellet quality and feeder adjustment on growth performance of finishing pigs. J. Nemecek^{1,*}, M. Tokach¹, E. Frugé², E. Hansen², S. Dritz¹, R. Goodband¹, J. DeRouchey¹, J. Nelssen¹, ¹*Animal Science and Industry, Kansas State University, Manhattan*, ²*Hubbard Feeds, Inc, Mankato*.

A total of 252 pigs (PIC 327 × 1050, 56.8 kg BW) were used in a 69-d trial to determine the effects of pellet quality and feeder adjustment on growth performance of finishing pigs. There were 5 pens per treatment with 7 pigs and 1 replicate with 6 pigs per pen. Treatments were arranged in a 2 × 3 factorial with main effects of feeder adjustment and diet form. The conventional dry feeders had 2, 35.6-cm-wide by 11.4-cm-deep feeder holes. Feeder adjustments were narrow and wide (maximum gap opening of 1.27 and 2.54 cm). Diet forms were meal, poor-quality pellets (50% fines), and screened pellets with minimal fines. No interactions were observed ($P > 0.14$). From d 0 to 22 and d 22 to 48, feeder adjustment did not influence ($P > 0.28$) ADG, but ADFI tended to (d 0 to 22; $P < 0.07$) or did decrease (d 22 to 48; $P < 0.02$) while G:F increased ($P < 0.05$)