

**Title:** Effect of Downers on Pork Quality - **NPB# 02-107**

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**Abstract:** Four commercial packing facilities in the Midwest were utilized to characterize the impact of downer pigs on meat quality and the impact of respiratory health on downer pigs. Lungs of downer pigs were evaluated for pneumonia using a 3-point scale for lung lesions (1 = no lung lesions and 3 = extreme lung lesions) and pH was measured at approximately 45-min post mortem on 246 carcasses before entering the cooler. At approximately 24 h post-mortem, subjective loin color scores, marbling, muscle firmness, carcass muscle conformation, gender, objective loin color and ultimate pH was determined on 229 carcasses. Muscle conformation scores averaged from 2.10 in plant A to 1.98 in plant D with an overall average of 2.14. Average 45 min pH measurements ranged from 6.42 in plant A to 6.22 in plant C with an overall average of 6.32. Lung score values averaged 1.67 overall and ranged from 1.56 in plant A to 1.98 in plant D. All plants had a larger percentage of barrows that were classified as downers compared to gilts. Subjective color averaged from 3.55 in plant C to 4.00 in plant B and had an overall average of 3.75. Overall average marbling scores were 2.72 and ranged from 2.07 in plant A to 3.29 in plant B. Overall muscle firmness average was 3.16 and ranged from 2.80 in plant A to 3.75 in plant B. Overall average Minolta L\* values were 45.72 and ranged from 43.81 in plant B to 46.60 in plant C. Overall average final pH values were 6.00 and ranged from 5.90 in plant D to 6.20 in plant A. Drip loss averaged from 1.42% in plant B to 2.37% in plant C with an overall average of 1.91%. Downer animals tended to produce pork that was dark in color, exhibited a relatively high ultimate pH and low drip loss with virtually no relationship between downer animals and lung score value.

**Key words:** Swine, Downers, Pork Quality

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