

## The effect of Intramuscular fat on Pork Quality

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To investigate the effect of intramuscular fat on pork quality, two trials were carried out using pigs from same farm. In trial 1, carcass weight (CW), sex, backfat thickness (BF), ultimate pH (pHu), subjective scores including color (SCS), firmness (SFS), marbling (SMS) and pork quality (PQ) were measured, whereas drip loss %(DL), intramuscular fat % (IMF) and objective color measurements including L\*, a\*, b\*, C\* and h were added in trial 2. The correlation between SQS and SCS, SFS were 0.84 and 0.80, respectively ( $p < 0.001$ ). SMS showed lower correlation with SQS (0.58,  $p < 0.001$ ) than that of SCS and SFS. Among sex, BF and CW, sex showed the highest correlation with SQS, and CW showed the lowest correlation. The SCS, SFS and SQC of male were better than those of female ( $p < 0.05$ ). With increasing of CW and BF, both pHu and SCS were higher due to high SMS. When pork were classified as PSE (pale, soft, exudative), RSE (reddish-pink, soft, exudative), RFN (reddish-pink, firm, non-exudative) and DFD (dark, firm, dry), BF of RFN was thicker than that of others ( $p < 0.05$ ). These results imply that CW and BF affects SMS, so that PQ is affected with them. To more carefully investigate the results of Trial 1, objective color, DL % and IMF % were measured in Trial 2. Although the correlation between CW and BF was 0.36 ( $p < 0.001$ ) and that between BF and IMF was 0.33 ( $p < 0.001$ ), significant correlations between PQ and CW, and BF were not showed. Also the correlation between sex and PQ was 0.11 ( $p > 0.05$ ), and differs from that of Trial 1. All measurements of male was not different from those of female ( $p > 0.05$ ). Although CW and BF was increased, PQ was not changed because of no changing of L\* value and DL. Also, even though IMF was increased, meat color and water-holding capacity were not changed. There was not significantly different IMF among four pork qualities ( $p > 0.05$ ). These results show that marbling does not effect on PQ, although CW and BF are correlated with marbling in pork.