

# Reduction of antibiotic residues in swine slaughtered in provincially inspected abattoirs in Alberta

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The prevalence of selected antibiotic residues was determined in sows, market hogs and underweight pigs slaughtered at provincially inspected facilities in 2001 and 2004. Whole kidneys were collected from systematically selected pigs slaughtered in 45-48 different abattoirs over a three month period in fall 2001 and spring 2004. Sampling was randomly assigned in proportion to the number of pigs in each class slaughtered at that facility. In 2001, 815 pigs (331 underweight, 357 market hogs, 127 sows) were sampled and analyzed for tetracyclines, sulfonamides, and beta lactams. In 2004, 1343 pigs (550 underweight, 514 market hogs, 279 sows) were sampled and analyzed for an expanded list of antibiotics including tetracyclines, sulfonamides, beta lactams, macrolides and lincosaminides. Residue levels are considered violative when they exceed the Maximum Residue Limit (MRL) set by Health Canada. A total of 15 kidneys (1.8%) exceeded MRL (all for sulfamethazine) in 2001, whereas in 2004, only seven kidneys (0.5%) exceeded MRLs (four (0.3%) for sulfamethazine, two (0.15%) for penicillin G, and one (0.07%) for oxytetracycline). Underweight pigs accounted for most (15/22) of the violative residues detected.

## **Implications:**

The prevalence of violative antibiotic residue levels in pork slaughtered in provincially inspected Alberta abattoirs is very low and is decreasing. Increased enrollment in the Canadian Quality Assurance (CQA) Program, which focuses on responsible drug use, has likely contributed to reduced violative residues. Antibiotic residue surveillance offers opportunity for feedback to producers and provides continued assurance of food safety.