

PORK SAFETY

Title: Development of Antibiotic Usage Information in Swine - **NPB #05-187**

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Abstract

We evaluated cost accounting-based and in-barn methods of allocation of antibiotics across closeout groups and sow farms within one production system. This encompassed deliveries of antimicrobials to be administered in feed or water, as well as injectable products. Our aim was to validate the accounting records of deliveries, evaluate the amount of carryover of product between closeout groups, and estimate the fluctuation of inventories in sow herds. We also estimated overall antibiotic use by class and delivery methods. Beginning and ending antibiotic and animal inventories were obtained for the sow herds and closed out groups. Antibiotic use was collected by product code and summarized by type. Validation of the usage data was achieved through reconciliation with on-farm inventories and collection of empty antibiotic containers. Additionally, we surveyed farm managers on the likelihood of collating and sharing such information.

Three general observations can be made from this study:

1. For other than antibiotics delivered through feed, there is a systematic underestimation of antibiotic usage in on-farm records. Our estimate is that 42% of antibiotics that are delivered to the farm to be administered through injection or water delivery were recorded.
2. Collection of empty containers can increase the likelihood of recording, though methods of ensuring compliance need to be identified.
3. Cost accounting methods are the most accurate method of identifying and attributing antibiotic use. However, there is some reluctance to sharing that information. It is probable that this can be overcome with further education.

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