An On-Farm Survey of Swine Feeds and Feed Ingredients for *Salmonella*, and Identification of Associated Herd Risk Factors

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Research during the last year has centered on conducting a survey for the occurrence of *Salmonella* spp. in the feed and feed environment on the pig farm and identifying risk factors which may be related to such occurrence.

METHODS

Samples of feed and feed ingredients were collected from 30 pig farms in eight states and cultured for the presence of *Salmonella* spp. Information was collected on physical and managerial characteristics of each farm for risk factor analysis.

RESULTS

*Salmonellae* were isolated from at least one feed or ingredient in 14 (47%) of the 30 herds surveyed, representing five states. Of a total of 1264 samples, *salmonellae* were recovered from 36 (2.9%). Thirteen different serotypes and two that were untypable were found. The isolation of *Salmonella* spp. in the feed had a statistically significant association with six of the herd characteristics surveyed, including the lack of bird-proofing measures employed on the farm (p=0.03), using finisher feed that was prepared on the farm versus purchasing such feed (p=0.008), and housing pigs in facilities other than total confinement for the growing (p<0.025), finishing (p<0.025), gestation (OR=27, 95%CI:1.305-555.57), and breeding (p<0.005) stages of production.

CONCLUSIONS

*Salmonellae* were relatively easy to isolate in the farm feed environment when even a relatively small sample size, compared to the overall volume of feeds and ingredients on the farm, was taken. Certain management practices may be related to the occurrence of *Salmonella* spp. in the farm feed environment.