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## Concentrations, Viability Assessment, and Genetic Identity of the Parasite *Cryptosporidium* in Swine Lagoons of Southern Piedmont and Coastal Plain Watersheds

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### Why Does it matter?

The protozoan parasite *Cryptosporidium* infects pigs. It's environmental form, the oocyst, is shed in swine feces. These oocysts can contaminate lagoons of swine operations. Some species of *Cryptosporidium* are pathogenic to humans. Because effluent of lagoons are used to fertilize and irrigate crop land, knowing concentrations, viability status, and type of *Cryptosporidium* in swine lagoons will improve management of swine waste, and decrease risk to public health.

### What was done?

Lagoons of ten swine operations were sampled monthly for one year. Oocyst concentrations, viability status, and species distribution were determined.



### What was found?

All lagoons contained low numbers of oocysts. A small percentage (0 to 2 %) was viable (potentially infective). The majority (75%) was identified as swine specific and not pathogenic to healthy humans. A small number (0 to 6%) were identified to be pathogenic to healthy humans and considered a potential public health risk.

### What is the impact?

Knowing the distribution and viability status of *Cryptosporidium* parasites in swine lagoons will enable managers of swine operations to better manage their lagoon effluent and determine the amount of risk lagoon spray fields pose to public health.

### Research Team and Contact information

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