

2010 National Poultry and Animal Waste Management Symposium

Environmental Facilities Tour Thursday, October 28th, 2010

1. **A farrow-to-wean swine operation with approximately 4,000 sows swine farm.** The farm is the site of a candidate Environmental Superior Technology that continues to be refined. An ambient-temperature anaerobic digester was installed in late 1996 for the primary treatment of the swine waste. A 28,000 ft² greenhouse was installed to utilize nutrients and water from the treated swine wastewater for tomato production in 1999. A second greenhouse of the same size was added in 2001. Trickling nitrification biofilters were installed in 2002 to convert ammonia in the effluent from the anaerobic digester to nitrate and to provide nitrified water to recharge the pits in the pig houses where nitrate was expected to be denitrified to odorless nitrogen gas. In addition, ongoing research and demonstration projects for struvite recovery, duck weed production be presented.

2. North Carolina State University Field Research Facilities

-The NCSU Animal and Poultry Waste Management Center (APWMC) Waste Processing Facility is a facility designed to be flexible for housing specialized animal waste processing equipment for research and educational purposes. Recent and current facility use is primarily focused on waste to energy initiative projects involving: gasification; biodiesel production; and torrefaction.

-Poultry and Livestock Air Quality Research and Education Initiative – the initiative will emphasis research, teaching, and extension functions and is designed to accomplish several goals in relation to air quality:

- Foster scientific excellence

- Enhance understanding of urgent air quality and animal well-being issues

- Promote collaboration in air quality science, engineering, and animal well-being among researchers and scientists from industry, government and academia.

- Provide educational opportunities for students to acquire fundamental knowledge for developing careers in environmental air quality and animal well-being