



Maryland Department of Agriculture

Office of Resource Conservation

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University of Maryland Agricultural Nutrient Management Webinar February 01, 2013 Course # 2594

Post-Program Quiz for Agricultural NM CEUs

Complete this quiz with the information you learn from the Webinar presentations.

You must answer all the items correctly and submit this form to MDA to earn **1 Maryland Agricultural Nutrient Management continuing education credits**. Be sure to print your answers clearly. You must also include your printed name and the number as shown on your Maryland NM certificate or applicator voucher, your signature, date completed and your contact information.

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Poultry Manure-Induced Endocrine Disruption: Laboratory and Field Studies

(Dr. Lance Yonkos, February 2013)

Enter "True" or "False" for each statement:

- 1) ____ An endocrine disrupter, as defined by the World Health Organization, can result in either positive or negative impacts on an organism.
- 2) ____ Fecal steroids, such as estradiol, that function in poultry can also be functional in fish and human populations.
- 3) ____ Pelletizing of poultry litter reduces biological availability of contaminants.
- 4) ____ Elevated hormone concentrations in water bodies that are small enough to be measured in parts per trillion do not hold the potential to be harmful to biologic communities.
- 5) ____ Feminization of fish, and the subsequent effects on reproduction, is one of the main concerns regarding aquatic exposure to endocrine disrupters from poultry litter.
- 6) ____ Compared to no-till management, Dr. Yonkos found that conventional tillage resulted in a substantial reduction of estrogen in run-off from fields where poultry litter had been applied.
- 7) ____ Endocrine disrupters have been intentionally used for many years in the human population.
- 8) ____ In runoff data from field studies, Dr. Yonkos found that his previous lab-based studies had severely overestimated the contaminant concentrations that might be achieved in a "worst-case-scenario" runoff event.

- 9) ____ Calculating the impact of poultry litter as a source of endocrine disrupters is a matter of knowing the size and number of poultry flocks in a house before clean-out occurs.
- 10) ____ The Yonkos research team found that testicular oocytes were more prevalent overall in the largemouth bass population on Eastern Shore sites than in the Potomac River.

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