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**Manure Ammonia Emission Reductions
Achieved by Feeding DDGS to Laying Hens
Housed in a Production Environment**

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Earth Net LLC

Species: Poultry (Layers)

Use Area: Animal Housing

Technology Category: Diet Modification

Air Mitigated Pollutants: Ammonia

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System Summary:

A diet containing 10% Dried Distillers Grains plus Solubles (DDGS) fed to laying hens in a production environment reduced manure ammonia emissions an average of 16.9% compared to standard diets. Ammonia emission reductions were variable over time, ranging from +6.3% to -33.3% compared to control group emissions.

Applicability and Mitigating Mechanism:

- Ammonia emissions are reduced through the use of alternative feed components.
- The technology is suitable for use in any layer housing system.
- Manure ammonia emissions are reduced due to reduced manure pH caused by increased volatile fatty acid production.

Limitations:

- DDGS often contains detectable levels of antibiotic residues that are banned for use in laying hens.
- DDGS may be contaminated with sufficient mycotoxins to adversely affect bird health and production.
- Lack of uniform DDGS processing standards causes significant variability in metabolizable energy content, amino acid content, and amino acid digestibility, which makes precise feed formulation difficult.

Cost:

The effect of implementing a diet containing a 10% DDGS on overall production costs has yet to be determined.