



**Department of
Biological and
Agricultural
Engineering**

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Phosphorous/Ammonia Removal System

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Description:

This invention is a phosphorous and ammonia removal system for livestock farms. The device treats wastewater to separate the compounds in solid form and returns clean, treated water. Both the phosphorus and processed ammonia can be used as common fertilizers or reprocessed for agricultural and non-agricultural uses. Prototype studies on dairy farm waste have shown that the device can process 100,000 gallons of manure per day at a rate of 75 gallons per minute. Using this device can lower the amount of phosphorous and ammonia that enters the environment as well as remove 99.9999 percent of coliform bacteria to ensure a cleaner farm.

Advantages:

- Produces useful and salable byproducts
- Greater environmental protection
- Relatively inexpensive to build

Commercial Uses:

- Dairy cow waste management
- Source material for fertilizer

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