**Global Partnership on Nutrient Management**

**BMP Case Study**

**Overview**

**Name:** Riparian Buffer Strips Perform Well in Iowa Study  
**Location/Terrain:** Bear Creek, Story County, Iowa  
**Crop(s):** Nonspecific cropland near water sources  
**Nutrient(s):** Nitrate and Phosphorous  
**Rationale:** Use riparian buffer strips to reduce nitrate and phosphorous runoff.

**Issue(s) of Concern/Challenges:**  
Nutrient overloading from crop fields to local water sources.

**Practice Objectives:**  
Test the viability of riparian buffer strips to remove nutrients from crop runoff water.

**Practice Description:**  
A saturated buffer was installed to catch tile line water before it is released into waterways. The system uses a shallow lateral line with control structures that raise the water table and slow outflow, allowing the buffers to naturally remove nutrients such as nitrate and phosphorous.

**Outcomes:**  
The system curbed over half of the immediate tile line outflow into waterways. It removed 100 percent of the nitrate from 60 percent of the field tile flow.

**Significance:**  
The outcomes of this study were much higher than predicted (it was originally expected to divert just 10 percent to 15 percent). It has a lot of promise in the right situations.

For more information, please contact Chuck Chaitovitz a chuck.chaitovitz@getf.org or visit www.gpa.unep.org/index.php/global-partnership-on-nutrient-management.
