Overview

Name: Improving Nitrogen Management and Irrigation Practices Results in Efficiency and Yield

Location/Terrain: US SE Oregon and SW Idaho (Treasure Valley)

Crop(s): Onions, corn wheat, sugar beets, potatoes, beans

Nutrient(s): Nitrogen and water (irrigation)

Rationale: Improve nitrogen use and increase yield output

Issue(s) of Concern/Challenges:
Irrigation methods and nitrogen application was inefficient and as a result, crop yields were not maximized.

Practice Description:
Previously, nitrogen was applied twice a year and furrow irrigation was used. In order to change the nitrogen application and irrigation system, intense educational programs were implemented.

Practice Objectives:
Through the implementation of intense educational programs, nitrogen application and irrigation methods were altered. Irrigation improvements include the use of drip irrigation and changes in land practices. Nitrogen application was altered in ways to reduce nitrate leaching, such as applying nitrogen after irrigation.

Outcomes:
Yields increased and nitrogen use was more efficient.

Significance:
Results show that educational programs can have a significant difference on farming methods and farm revenue.
We request your assistance to engage experts in the developing world to gather best practices and case studies of successful or unsuccessful practice (in order to draw lessons what needs to be avoided) and project implementation.

Proper nutrient management best practices must be scaled-up to ensure the long-term stewardship, conservation and sustainable management of our soil health and water resources. The Global Environment Facility and UN Environment Programme recently launched a project entitled, "Global Partnership on Nutrient Management" to promote nutrient management best practices and policies in key "hot spots" to reduce nutrient enrichment and oxygen depletion from land-based pollution, in foundations for reducing nutrient pollution worldwide.

The 2009 World Food Summit on Food Security stated that the world must produce 70 percent more food by 2050 than currently produced to sustain a world population of 9 billion. There is widespread scientific agreement that intensification of food production and fertilizer use will increase nutrient loading to already-stressed coastal ecosystems, which is directly linked to "dead zones" of low oxygen. These hypoxic "dead zones" caused by nutrient pollution worldwide.

The Global Environment Foundation & Technology Foundation (GETF) is supporting the GEF and UNEP to develop a global "tool box" of nutrient management best practices and policies. This inventory and analysis activity is intended to help the policy makers and small farmers in the developing world to scale-up and implement nutrient management best practices.

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