



Title: Accelerating Riparian Buffer Adoption to Enhance Water Quality and Farm Income

Name: David Shelton

Email: dshelton2@unl.edu

Organization: University of Nebraska

State: NE **Region:** Heartland

Year of Funding: 2000

Theme: Environmental Restoration

Situation: Riparian buffers are strips of vegetation established along streams or other water bodies that provide a “buffer” between the water body and adjacent cropland. Buffers protect water quality in two ways: sediment and other particulate-bound pollutants are trapped within the buffer; and runoff water, often containing soluble nutrients and pesticides, is reduced through increased infiltration in the buffer. Although farmers and landowners may recognize these benefits, they are often reluctant to install buffers since land must be taken out of production, which decreases income.

Objectives: The overall goal of this project is to promote the installation of conservation buffers using a three-component approach of: 1) demonstration sites; 2) a peer-based outreach component; and 3) a multi-faceted educational program. One objective is to demonstrate/evaluate “productive conservation”, or the incorporation of income-producing plant materials into a conservation practice, specifically a riparian buffer.

Methods: Methods used to achieve project objectives include: 1) Major demonstration sites to showcase: a gamut of buffer maturities and types; and buffer plantings that have income-generating potential through the production of specialty bio-based products. 2) A peer-based outreach component using farmers or other respected community leaders to individually contact farmers and landowners to promote buffer adoption. 3) A multi-faceted educational program consisting of meetings, tours, workshops, training sessions, a website, electronic presentations, and other techniques.

Partnerships: Partnerships include: University of Nebraska Institute of Agriculture and Natural Resources; NE Department of Agriculture; Papio - Missouri River, Lower Elkhorn, and Lewis and Clark Natural Resources Districts; NRCS; NE Forest Service; NE Game and Parks Commission; and Pheasants Forever.

Research: Although an Extension Education project, several research components have been integrated into this project, and significant research funding has been leveraged. For example, three graduate students (2 PhD; 1 MS) are working on buffer-related problems, with one or more project leaders serving as co-advisors. Major research investigations include: growth analyses of both conventional and non-conventional buffer plant materials; weed management; development of a runoff simulator; and sociological factors influencing buffer adoption.

Resources: Some examples of resources leveraged as a result of this project include: \$73,000 from three different Natural Resources Districts; \$64,000 from three different University of Nebraska endowments and/or memorials; and \$29,300 from the NE Department of Agriculture Buffer Strip Program.

Results: One outcome is that “FarmLink”, the peer-to-peer portion of the project, has successfully promoted conservation buffers within a targeted watershed. Four local farmers were trained, and they contacted 42 of their neighbors to explain the benefits of buffers and other conservation practices. Of these, 28 signed a form stating their intent to install some type of conservation practice. These individuals then work with the local NRCS office to finalize plans and sign practice installation contracts. At least 11 contracts have been executed, establishing buffers on more than 60 acres.



The mission of CSREES is to advance knowledge for agriculture, the Environment, human health and well being, and communities.

