



Ensemble

*Valorisons la biodiversité en milieu agricole*

Colloque

**Aménagement** d'une zone riveraine multifonctionnelle

Pour une plus grande biodiversité en milieu agricole

Cahier du participant

Le jeudi 19 mars 2009  
Hôtel Plaza, Québec



Ensemble

*Valorisons la biodiversité en milieu agricole*

Jeu*di* 19 mars 2009

## Aspects de la planification et du design de bandes riveraines multifonctionnelles

**Michael G. Dosskey**, Ph.D., chercheur  
National Agroforestry Center  
United States Department of Agriculture  
Lincoln, Nebraska

## **PLANNING AND DESIGN ASPECTS FOR MULTIFUNCTION RIPARIAN ZONES**

Installation of multi-function riparian zones is a viable strategy for restoring the production of environmental goods and services to landscapes that are dominated by intensive crop and livestock production. Success of this strategy will depend on achieving widespread acceptance and adoption of riparian restoration by many independent landowners. To persuade landowners to manage riparian zones for public benefits may require direct compensation for taking land out of production and/or restoration designs that also achieve personal objectives of each landowner. Multi-objective designs require good planning.

The process of riparian design involves determining proper location, size, vegetation, and management to achieve each desired objective, and then blending these criteria for several different functions. Water quality degradation is a universal concern in agricultural regions. Wildlife habitat and aquatic health are also common concerns. Landowners may seek other benefits such as production enhancements, alternative products, aesthetic benefits, and credits for sale in developing carbon and water quality markets. The design process seeks to determine the minimum criteria required to achieve each and all desired goals, simultaneously. Typically, conflicting criteria will arise and compromises will be necessary – even to the point of eliminating some goals because they are incompatible. Finding the right balance among benefits and tradeoffs is the art of the design process.

Alternative design approaches may be required if it is unfeasible to develop a detailed design for each landowner. One alternative is to provide a single design that would be applied in all circumstances, or, that could be used as a starting point for adjustments depending upon specific objectives, site characteristics, or other considerations. The single design approach is simple to administer, but sacrifices effectiveness. Customizing a simple design adds flexibility and effectiveness, but it is more difficult to administer and requires technical tools and expertise. Assessment of benefits and costs of alternative approaches is necessary for selecting the best approach for planning and design of multi-function riparian zones.