



# Elizabeth (Libby) Dayton

## Project Title

Phosphorus Runoff Risk

## Biography

Dr. Dayton is a Soil Scientist in the School of Environment and Natural Resources at The Ohio State University. Dr. Dayton received a B.S. in Environmental Science from the University of Massachusetts at Amherst, and a M.S. and Ph.D. in Soil Science from Oklahoma State University. As part of the Soil & Environmental Chemistry Research Group at OSU, Dr. Dayton has an active research program, one aspect of which is focused on mitigation of non-point source agricultural pollution. On the current project Libby serves as evaluator to revise the Ohio Phosphorus Risk Index using field-scale and edge-of-field monitoring data.



## Project Description

With continuing problems of surface water quality degradation, Ohio agriculture is under increased pressure to reduce phosphorus field runoff. A robust functioning Ohio P Risk Index will give framers a tool to manage field scale P runoff, while sustaining agricultural productivity and protecting surface water quality. The Ohio P Index

[http://efotg.nrcs.usda.gov/references/public/OH/Nitrogen and Phosphorous Risk Assessment Procedures.pdf](http://efotg.nrcs.usda.gov/references/public/OH/Nitrogen%20and%20Phosphorous%20Risk%20Assessment%20Procedures.pdf) is used to develop nutrient management plans (NMPs) for both manure and commercial fertilizer. Ensuring that these plans are scientifically valid and sufficiently protective of surface water quality, demonstrates good stewardship by the agricultural community. This OSC supported project will increase the utility and implementation of the Ohio P Index beyond a tool used merely to assess risk of P runoff into a tool producers can use to make manage their phosphorus runoff risk and thus, their Ohio P Index score.

## Objectives

- 1) Validate and as necessary revise the Ohio P Risk Index
- 2) Quantitatively, integrate additional best management practices (BMPs) into the Ohio P Index
- 3) Create an online, web-based, interactive tool (online tool) that will be developed to simplify evaluation of P runoff risk

