Evaluating Old and New Methods of Indexing Dissolved Phosphorus Loss in Pennsylvania's Phosphorus Index. (S04-callahan101320-Poster)

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Abstract:

Concerns over the effectiveness of runoff class as a determinate of dissolved phosphorus (DP) transport potential in Pennsylvania's Phosphorus Index (PI) have prompted the investigation of alternate methods to index potential DP loss. We compared the accuracy of DP prediction using runoff class at soil survey and field scales. In addition, other methods of indexing DP were examined to determine if they could be incorporated into Pennsylvania's PI. The goal of the research was to find a defensible way of indexing potential DP losses in Pennsylvania fields, while balancing accuracy and user efficiency. Experiments were carried out on two topographically similar, yet hydrologically dissimilar hillslopes in a 10.5 hectare watershed in Northumberland County, Pennsylvania. Since the site was mapped as one soil series, as a result of scale issues, it provided a way to test the usefulness of county level soil map inputs to the PI. Results of our research will help provide new data resources for the transport section of the PI as well as making it more technically defensible, thereby improving the decision-making process.

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