Effects of Phosphorus Index Implementation at the Farm Scale in Pennsylvania. (S06-kogelmann769904-poster)

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Abstract:
The Phosphorus Index, a field assessment tool for identifying agricultural areas that pose a risk to surface water quality from P loss, is beginning to play a role in nutrient management planning in Pennsylvania. The P-Index combines indicators of P sources and P transport potential and provides guidance for nutrient application. In the extreme case no P may be applied to the field. Currently, USDA-NRCS in Pennsylvania requires P-based management plans based on the P-Index for operators receiving technical or financial assistance for manure related issues however, wider implementation of the P-Index is being considered by state regulatory agencies concerned with water quality. Restrictions on P additions to fields that have high risk of P loss may pose serious constraints with respect to manure management for farmers that raise large numbers of livestock on relatively small acreages. In 2002 a statewide GIS based assessment of P-Index implementation identified specific regions of Pennsylvania where manure management restrictions are expected to have the greatest impact. Results are presented for phase 2 of this research where selected farms in the previously identified regions were assessed based on the P-Index to identify the “on farm” effects of full P-Index implementation. On and off farm options were explored when manure application was found to be restricted.

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