A Statewide Assessment of the Impacts of P-Index Implementation in Pennsylvania. (S11-kogelmann100448-Poster)

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Abstract:

Phosphorus (P) based nutrient management regulations may affect the viability of agricultural systems in PA. Identification of areas likely to be impacted by P regulations will allow targeting of state programs and maximum reduction of P losses. A GIS analysis based on a large soils database (1996-2001) and available geospatial data concluded the following: Nearly half of soil samples exceeded the agronomic optimum P level, suggesting widespread over fertilization. Over 95% of soil samples had P levels below the 200 ppm threshold for full P-Index use. Spatial trends indicated that southeastern PA had a high percentage of samples exceeding the P-Index screening level. There was a subtle trend of increasing soil P on agricultural lands. There is a positive relationship between mean soil test P for a zipcode and animal density. Mountainous areas tended to have a higher proportion of agricultural land within 150 feet of streams. A weighted combination of the percentage of soil samples exceeding 200 ppm P and proportion of agricultural lands within 150 feet of streams, revealed areas where P loss risk may be high and P-Index implementation may impact agricultural enterprises.

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