A Production Agriculture Perspective on Nutrient Management Issues. (S04-snyder103433-Oral)

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Abstract:

Heightened interest in nonpoint source N and P losses has caused an emphasis shift in Land Grant universities and the USDA-ARS, away from production agriculture toward environmental quality. Crop yields increased 9 to 38 percent the last 20 years, while fertilizer N use increased 8 percent and fertilizer P and K use declined 21 percent. Soil test summaries and input to removal estimates indicate many fields need increased P and K. With appropriate BMPs, surface runoff losses of N and P are often lower than 5 percent of the applied. Development of Total Maximum Daily Load and Confined Animal Feeding Operation regulations are merited in some watersheds with impaired water quality, largely because of surplus manure nutrients. Agriculture needs water N and P criteria development to be based on reasonable biological standards; not arbitrary or capricious thresholds, or percentile rankings from a few monitored waters. Sizeable watershed studies are needed, to evaluate use of the P Index approach to identify land areas at risk of P movement, coupled with assessment of water quality impact after BMP implementation, before adoption of regional or national policies and regulations.

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