ON-FARM CONSEQUENCE OF CONVERSION FROM N- TO P-BASED NUTRIENT MANAGEMENT STNADARDS

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Nutrient management plans were compiled from a pool of 13 farms across Wisconsin that had been developed by seven different crop consultants and implemented using the nitrogen-based NRCS-590 standard (1999 version). This data set consists of 10636 cropland acres with soil data, cropping information and available cost data attributed to specific field operations and management. Comparisons of the N based standard with the current phosphorus-based standard were made. Major differences between the versions of the standard relate to acreage impacted by proximity to surface waters and acceptable P management strategies where soil tests exceed 50 ppm soil test P. Surface water quality management areas (SWQMA) acreage increased from 665 to 1135 acres in current version of the NRCS standard. Soil test P levels for the cropland set are distributed as follows: 55% < 50 ppm; 30% > 50 ppm and < 100 ppm soil P; 15% > 100 ppm soil P. Impacts of the level of soil test P varies by farm and landscape and will be better defined through the implementation of the phosphorus index which is a component of the current standard. Impacts of the phosphorus index versus the soil test P strategy are being determined as well as the direct costs of nutrient management implementation on the participating farms.

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