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**Facilitating Social and Environmental Successes in Performance-based Environmental Management**

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Abstract:

Citizen councils in four Northeast Iowa watersheds are implementing locally-directed programs of performance-based incentives for environmental crop and livestock management through an education-based conservation program facilitated by ISU Extension. Individual operators can track their own environmental management improvements (on-farm performance) by measuring baseline and improved performance of agronomic tests and indexes that relate to nonpoint source nutrient and sediment loading - including the Phosphorus Index (PI), Soil Conditioning Index (SCI) and cornstalk nitrate test. The watershed councils are committed and have successfully leveraged funds from public and private sources for their incentives. Extension has contributed group-process and leadership development resources to assist in formation of the councils, which in these high-impact agricultural watersheds consist principally of farm operators. The councils seek to improve their water quality and promote environmental management by providing small incentive payments for practicing and improving targeted performance measures. Each council begins with a 'model' performance contract and develops their own incentive structure, considering their watershed impairments, baseline field and farm performance levels and locally preferred conservation practices. Councils evaluate and modify their programs annually to improve the appeal of alternative conservation management practices. An Extension specialist assists cooperators to calculate their indexes, and provides councils and individual cooperators with field level performance results and model farmer-designed management scenarios to determine the effect of proposed management changes. As farm operators learn to interpret science-based measures of environmental improvement (performance) the program promotes and sustains individual adaptive management toward environmental stewardship goals. This framework - in which extension supports local decision-making with technical assistance provided as an educational program - has resulted in improvements in both social and environmental indicators of watershed management.

Impact Statement:

Iowa State University Extension has piloted agricultural environmental performance-based strategies in four watersheds with over 140 farmers. Cooperators have increased their awareness of nonpoint source water quality issues, developed local incentive programs targeting priority issues, and increased adoption of strategies to address field, farm and watershed level environmental concerns. CSREES project support was leveraged to gain financial support from the Iowa Farm Bureau, Iowa Corn Growers, Iowa Watershed Improvement Review Board and US EPA. Success in the pilot watersheds has led to CSREES approval of a project to expand the performance-based approach across Iowa watersheds.

Category: Human Dimensions

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