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## **Cost-Effective Conservation: Using a BMP Auction for Targeting in Kansas**

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### Abstract Text:

Over the past few decades many millions of dollars have been spent on the promotion, installation, and maintenance of cropland best management practices (BMPs) which reduce nutrient and sediment runoff. Compensating producers through conservation programs for BMP adoption has had notable success to date; however, there are still many producers that choose not to participate in conservation programs and/or decide not to implement BMPs. Why is this the case and how can we as conservationists better promote and encourage BMP adoption and conservation program participation? Here, we briefly report the results of a producer survey that focuses on the current state of conservation adoption and knowledge as well as the attitudes and perceptions regarding BMPs and water quality. We will also explain how we used an innovative market-based approach, in the form of a BMP Auction, to target BMPs in a small watershed in east-central Kansas. In this BMP Auction, agricultural producers in the Pomona Lake watershed competed by submitting bids to supply the watershed with sedimentation reductions through the implementation of BMPs. The bids were ranked by the amount of tons of sedimentation reduction generated per dollar. Winning bids came from producers that provided the most sedimentation reduction for the least cost. The ranking process was repeated until the funds were exhausted. A BMP Auction allows the buyer to identify and purchase the most cost-effective water quality improvements for a specified budget. This BMP Auction provided an excellent opportunity for stakeholders to actively participate in applying scientific information (watershed modeling and economics) to guide change in the watershed. This project also serves as a good example of how cooperation and collaboration between University Extension, NRCS, county conservation districts, Corps of Engineers, and local watershed stakeholders can yield significantly positive results.

### Impact Statement:

There were 24 bids for practices from 12 different landowners requesting \$19,062 in funding. The practices funded through the BMP Auction resulted in 938 tons/year of soil loss reduction at the edge of field with an overall erosion reduction efficiency of 75.4%. The local stakeholder leadership team requested that a 10% weight be placed on the sediment delivery factor to Pomona Lake. So, of the 938 tons, the landowners received credit for 778 tons of sedimentation reduction at the lake. The 778 tons of sedimentation reduction came at a price of \$19,062 for an overall cost-effectiveness of \$24.50 per ton.