CSREES National Water Quality Program

Title: A Policy Evaluation of Transport Subsidies for Poultry Litter in West Virginia

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Situation: In West Virginia, much of the poultry industry is concentrated in the Potomac Headwaters region of Grant, Hampshire, Hardy, Mineral, and Pendleton counties. This concentrated production is supported almost exclusively by imported feed, resulting in a large surplus of nutrients contained in poultry waste products. To stimulate the movement of litter outside this region, the West Virginia Department of Agriculture administered a transport subsidy program to farmers throughout West Virginia during 2001 and into 2002. These subsidies were intended as a pilot program to demonstrate the feasibility of moving surplus poultry litter from the five-county region. The program's purpose was to move litter out of the five-county region where there are potentially excess nutrients being applied to agricultural lands and degrading water quality. Litter was to be moved areas of West Virginia where the soils are nutrient deficient, particularly in terms of P, and applied in an environmentally appropriate manner. A total of $75,000 in funding was provided for this program by the West Virginia Department of Agriculture and the poultry processing industry (Pilgrim's Pride).

Objectives: The objective of this study was to evaluate the effectiveness of this litter transport subsidy program. The overall purpose of this program was to improve marketing of litter outside the nutrient dense area of the Potomac Headwaters region. From this purpose, three main policy goals were identified for evaluation. These goals were to: (1) expand the market for litter, particularly by attracting first time litter buyers; (2) provide subsidies to farmers who would be likely to continue to utilize litter in the future without the transport subsidy; and (3) encourage participants to use appropriate litter handling and application practices that provide for environmental protection. The first goal addresses the desire to expand the use of litter by farmers outside the Potomac Headwaters region to those who have never considered using litter before by reducing the monetary risk of trying this source of nutrients. The second goal concerns the design of the litter transport program as a temporary program to get farmers to try litter and not to be a permanent consideration in farmer decision-making about litter use. The last goal addresses the need to stress the importance of environmental protections against inappropriate litter use even in areas where animal manures do not pose as great a water quality concern as within the Potomac watershed.

Methods: The policy evaluation in this study was conducted on an ex-post basis. Two methods were used to evaluate policy goals: (1) surveys of program participants; and (2) economic feasibility computations for land application of litter with and without transport subsidies. Mail and telephone surveys of program participants were used to gather the necessary data to evaluate goals (1) and (3) with participant opinions, their experiences concerning litter use, and environmental protection practices. Present value cost comparisons of commercial fertilizer versus litter application were done to evaluate goal (2) and to assess whether litter application is economically feasible on a county level basis.

Partnerships: State government and private industry resources were utilized to support the transport subsidies. While administrated by the WV Department of Agriculture, there was an oversight committee that included personnel from state environmental agencies, West Virginia University (WVU) Extension Service, and private industry. Researchers from WVU College of Agriculture and Forestry and the WVU Extension Service conducted the evaluation research.

Research: This policy evaluation utilized research methods to evaluate the short term and long-term effectiveness of an education and outreach policy. Compliance with BMPs for litter application under nutrient management plans was assessed by reported behavior of program participants. This BMP compliance was compared to poultry growers in the Potomac Headwaters region. Growers in this region have been recipients of numerous education and outreach program for proper litter management. The research results showed that reported compliance with BMPs for litter management was equal between program participants and poultry growers in the Potomac Headwaters region.

Resources: The transport subsidy program was funded by state funds matched by private industry funds. The WVU Experiment Station funded the evaluation research.

Results: The transport subsidy program expanded the area where West Virginia farmers utilized litter and enhanced the likelihood of litter acceptance among economically feasible areas even without a subsidy. When the transport subsidy program is viewed over all three policy goals, this program would have to be regarded as effective in achieving short term outcomes for each goal: (1) attracting first time users of litter; (2) encouraging farmers within economically feasible counties to utilize litter, particularly when the assistance of an one time transport subsidy is considered in the analysis; and (3) providing for environmental protection from litter handling, storage, and application comparable to that of where the litter originated. The long-term impact of the program in dealing with surpluses of litter in the Potomac Headwaters region is less clear as the majority of participants have been hesitant about a continued use of litter without transport subsidies. This evaluation report was submitted to the WV Department of Agriculture and a manuscript has been submitted to the journal - Review of Agricultural Economics. Results from the economic feasibility analysis showed which counties in West Virginia were likely to be able to support transport of litter as a replacement for commercial fertilizer with and without subsidies. This economic feasibility information was presented to the Litter Transport Group in May of 2003. This group is a committee of NRCS personnel and Conservation District board members who are attempting to secure NRCS funds to construct a poultry litter storage and distribution facility in North-Central West Virginia. The economic feasibility information is being used by this committee to assist in their justification of this facility.