

WATER QUALITY/SOIL EROSION EDUCATION FOR MANAGERS OF CROP LAND

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INTERPRETIVE SUMMARY

A multi-year, multiple-discipline water quality educational program was initiated with partial support from EPA 319(h) water quality funds. The objective is to reduce sediment reaching streams that drain from watersheds where crops are grown. The emphasis of this grant program is on reduced tillage, no tillage, winter flooding of fields, and improving cover during non-crop periods. To evaluate the effect of this educational emphasis, any changes that managers implement during the time of the program are recorded and the results are tabulated. These data will be entered into the revised RUSLE model to estimate the amount of topsoil that is conserved as a result of the educational effort for this grant.

To get the initial momentum of this program started, we conducted a multi-agency training program in Little Rock on December 15, 1997. Natural Resources Conservation Service, Arkansas Soil and Water Conservation Commission, Arkansas Department of Environmental Quality, and the University of Arkansas Cooperative Extension Service developed the program jointly; although, it was conducted primarily by Extension staff for all of the technical personnel of the various organizations.

The educational effort contains elements of many effective technology transfer programs. A rice and a soybean field were divided into two watersheds each, one portion using the farm manager's conventional practice. Conservation practices were selected by Extension and NRCS personnel for the other portion of the field in a separate, but similar, watershed. The production practices in both fields were monitored

for two growing seasons. University of Arkansas recommendations, including the conservation measures, were evaluated. Tours were conducted and the multi-agency team continues to use tours as a method of reaching growers who like to "see" a "real" field rather than see a picture of the setting in conjunction with summarized data from the sites.

The program has a good basis for developing practical conservation measures and continuing to improve water quality by working with crop land managers. Slide sets and publications have been utilized. At this point, our county Extension staff has a good understanding of the cost-effective conservation measures for watersheds, are focusing on the project goals, are advising and assisting growers on practical applications to improve water quality and are about halfway through the educational phase. The relationships between NRCS district conservationists and UA county extension agents continue to grow, to the degree that the two organizations involve one another at the county level. Meetings and consultations continue. Growers understand the long-term goals and some of the cost-effective practices, as well as the technical expertise that is available to them.

Nine counties have been chosen for the evaluation phase. Surveys will be used to assess the progress on implementing conservation measures and to report on what soil erosion has been prevented during this educational program. The focus will remain on cost-effective practices; thus, significant impact should last long after EPA 319(h) and matching funds have been expended.