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Factors Affecting the Adoption of Best Management Practices in the Inland Northwest

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Abstract Text:

A survey of over 1,500 farmers located in northern Idaho and eastern Washington was conducted to examine conservation practices, attitudes, and perceptions. As part of this survey, farmers were asked to identify their adoption of best management practices (BMPs) across various landscapes. The BMPs examined in this analysis were gully plugs, strip cropping, buffer strips, and contour tillage. Contour tillage was the most commonly used practice among these farmers, regardless of the slope of their land, with buffer strips being used "often" by 20% of the farmers, and used "some" by 40% of farmers with fields that have slopes greater than 15%. Strip cropping was not used by over 50% of the respondents and gully plugs were used "often" by 18% of farmers with fields that had slopes greater than 6%. Farmers felt cost-shares of 65% and 59%, respectively, were needed to further invest in gully plugs and buffer strips. We used a multinomial logit model to predict the probability of adoption of each conservation practice and to identify key variables affecting farmer's decisions to invest in those practices. The perceived effectiveness of the conservation practice had the greatest impact on adoption, while the cost of implementation and maintenance were additional important factors in the adoption decision. With respondents leasing almost half of land they farmed, the stability of the lease and the willingness of the landowner to invest in BMPs were important factors in the adoption decision. The larger the acreage, the more likely the farmer was willing to invest in BMPs, while levels of education and financial stress had little impact on these conservation decisions.

Impact Statement:

Results of this survey and comments made by respondents indicate a keen interest by farmers in conservation issues. This study indicated that the perceived effectiveness of best management practices (BMPs) was the leading indicator of adoption. This indicates that education regarding the effectiveness of conservation practices is warranted and that cost-sharing programs of 50% or more are necessary to entice farmers to further adopt the conservation practices we examined. Educating off-farm land owners regarding the short-term and long-term benefits of BMPs is essential given that almost half of the land farmed by respondents was leased. As these recommendations are adopted by government agencies and university extension programs, soil loss will continue to diminish on the highly erodible lands of the Inland Northwest.