ECONOMICS OF PRECISION AG

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Abstract

Purchasing precision agriculture equipment such as automatic section control (ASC) for planters and sprayers for your farm can be a risky decision. The risk stems from the uncertain benefits provided by ASC and the associated ownership costs. The benefit of precision agriculture depends on the crop, the input, field characteristics, and farm size. For ASC technologies, the economic benefits of reducing overlap and double application of inputs varies with field shape and size. Larger farm sizes and farms with more irregularly shaped and small sized fields benefit more from ASC. Spreading technology costs over multiple crops and inputs also reduces time to payback investment in ASC. Researchers at The University of Tennessee have developed two decision aids to help farmers decide whether to invest in ASC technologies. The Automatic Section Control for Planters Cost Calculator (ASCCC) is an interactive computerized decision aid designed to help you evaluate the decision to invest in ASC on planters using a cash flow budget. The Cotton Precision Agriculture Investment Decision Aid is designed to evaluate investment in alternative variable rate technologies for sprayers including ASC. Both decision aids allow you to develop a custom analysis of the investment decision based on your farm situation. The programs include default investment costs, input costs, crop prices, and yields that can be changed to better reflect your farm operation situation. Go to http://economics.ag.utk.edu/ and click “Software Programs” under SOLUTIONS to learn more and to use the programs to develop a customized investment analyses for your farm.