

# **ACRE: Probabilistic Approach to Evaluate Farm Payout and Public Liability**

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## ACRE: Probabilistic Approach to Evaluate Farm Payout and Public Liability

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The 2008 Farm Bill created the optional ACRE program for grain farmers. With ACRE, farmers forego traditional counter-cyclical program payments, 20% of their direct payments, and 30% of the loan rate in return for potential ACRE payments. ACRE has a revenue guarantee that changes each year based on previous market and growing conditions. Basically, the program is designed to avoid major reductions in state-level revenue from one year to the next and thus protects farmers from significant price and/or production drops.

### Objective

The primary objective of this paper is to determine the expected ACRE payment using different price distribution assumptions. A secondary objective is to compare the public liability of this program compared to the traditional counter-cyclical program with full direct payments.

### Research Methodology

using simulation techniques whereby parameter estimates are drawn from distributions, correlations between the parameters are accounted for, and expected ACRE payouts are returned in distribution form. Since ACRE only pays when there is a decrease in the expected state-level revenue, it is essentially impossible to evaluate this program without a probabilistic approach. Moreover, without a probabilistic approach for the program payout, it is difficult for farmers to evaluate the risk management benefit of the program.

