

Risk-Free Farming?

*Risk-Return Analysis of Soybean Farming
under the 2002 Farm Bill*

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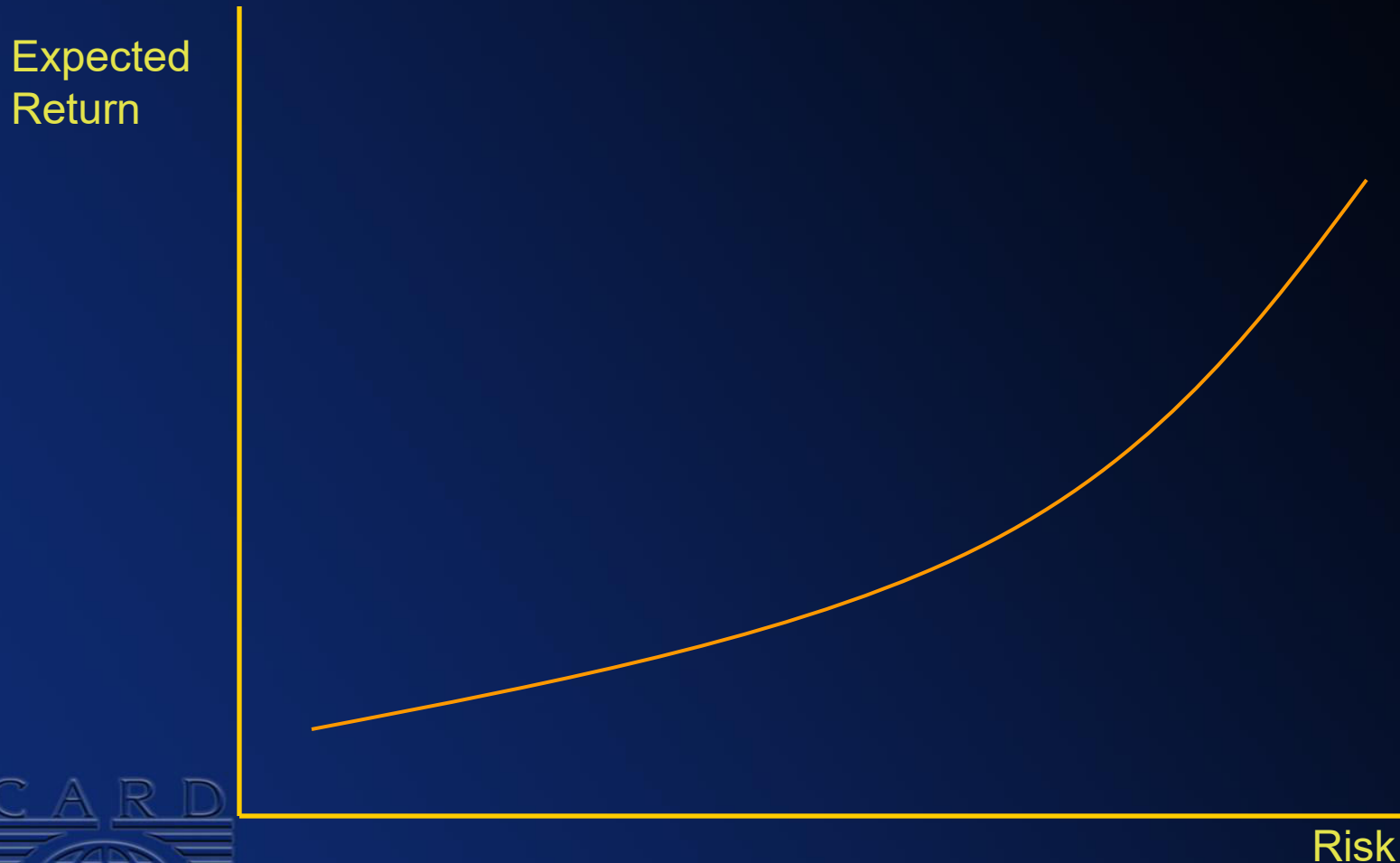


Risk and Return in a Free-Market Economy

- Capitalism works when those with capital are induced to invest by the expectation of a higher return on invested capital than on non-invested capital.



Risk-Return Tradeoff

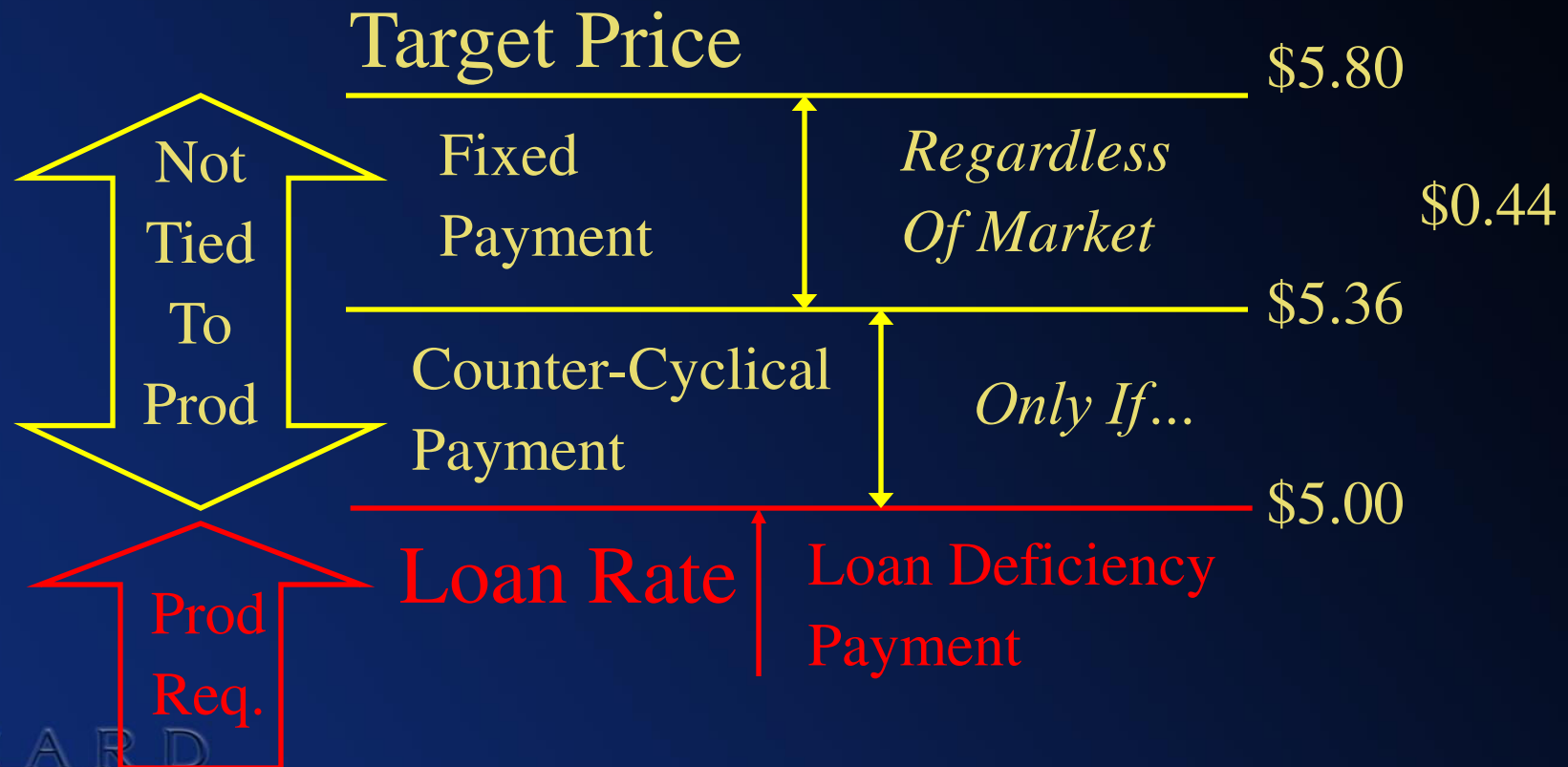


Are Farm Programs Counter-Productive?

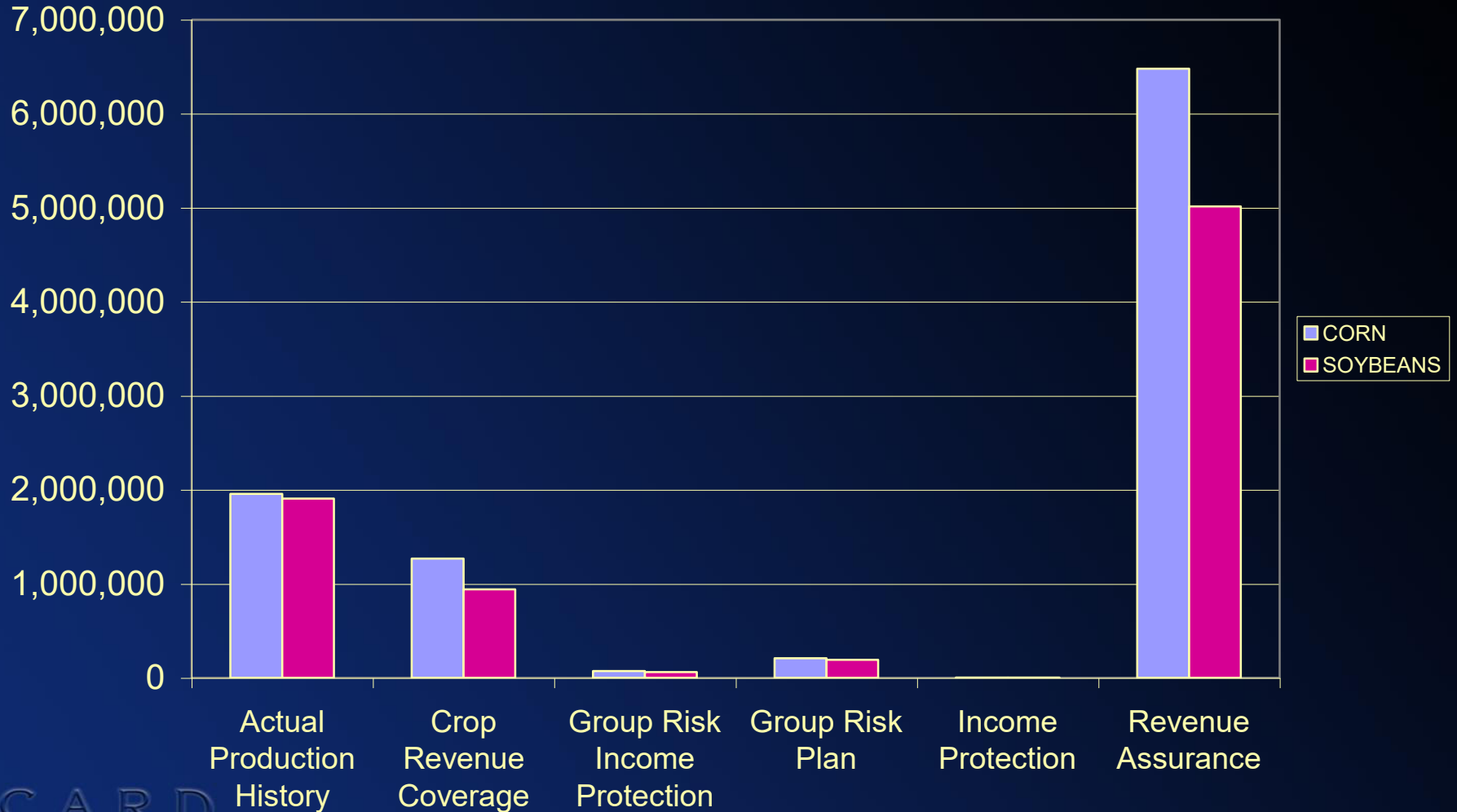
- One justification for farm programs is that U.S. farmers need support because of their exposure to a great amount of risk.
- But won't a reduction in risk also reduce expected returns?
- Perhaps, but farm programs also increased expected or average returns.



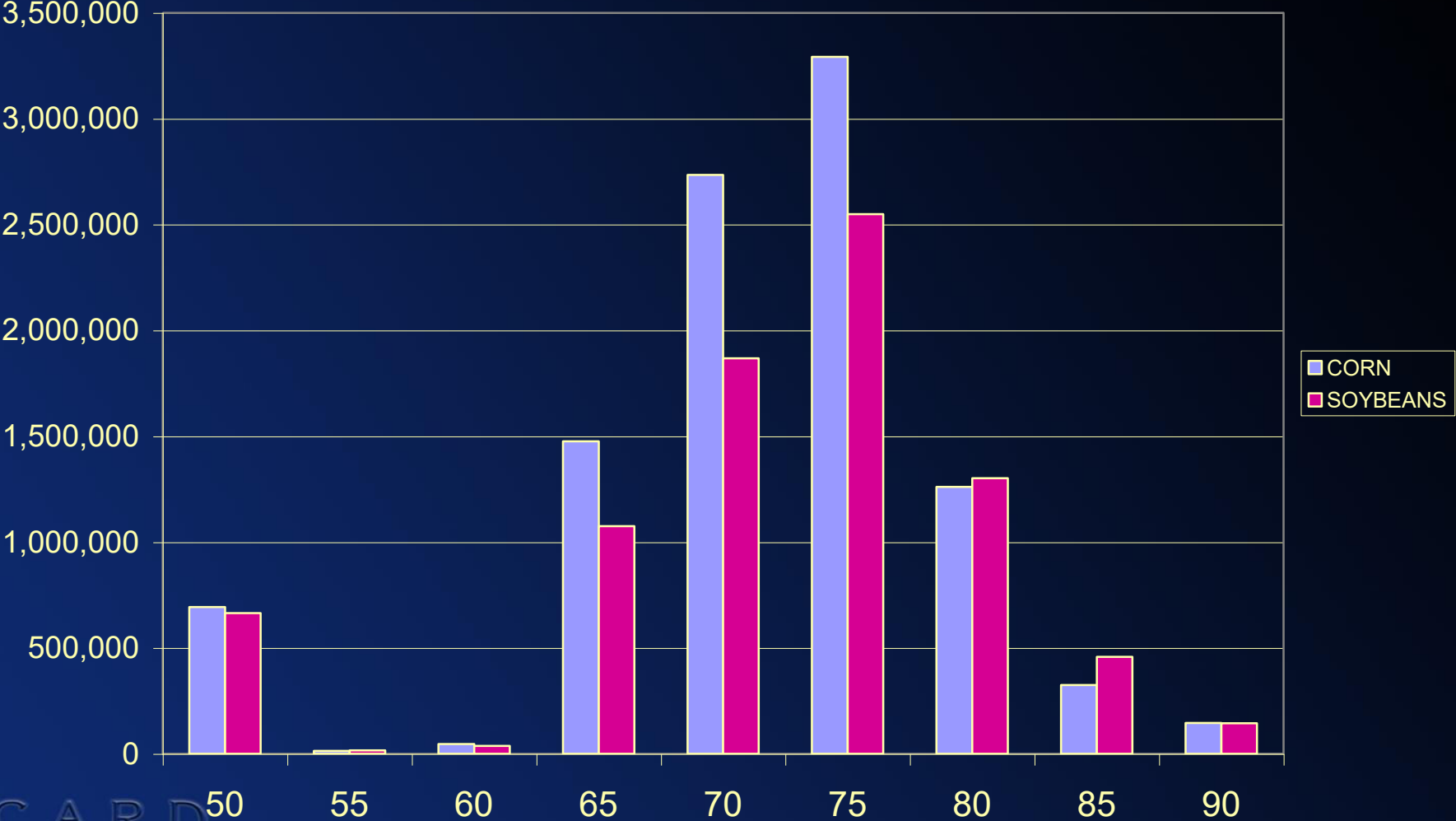
Structure of Program Payments for Soybeans



2004 Acres Insured in Iowa

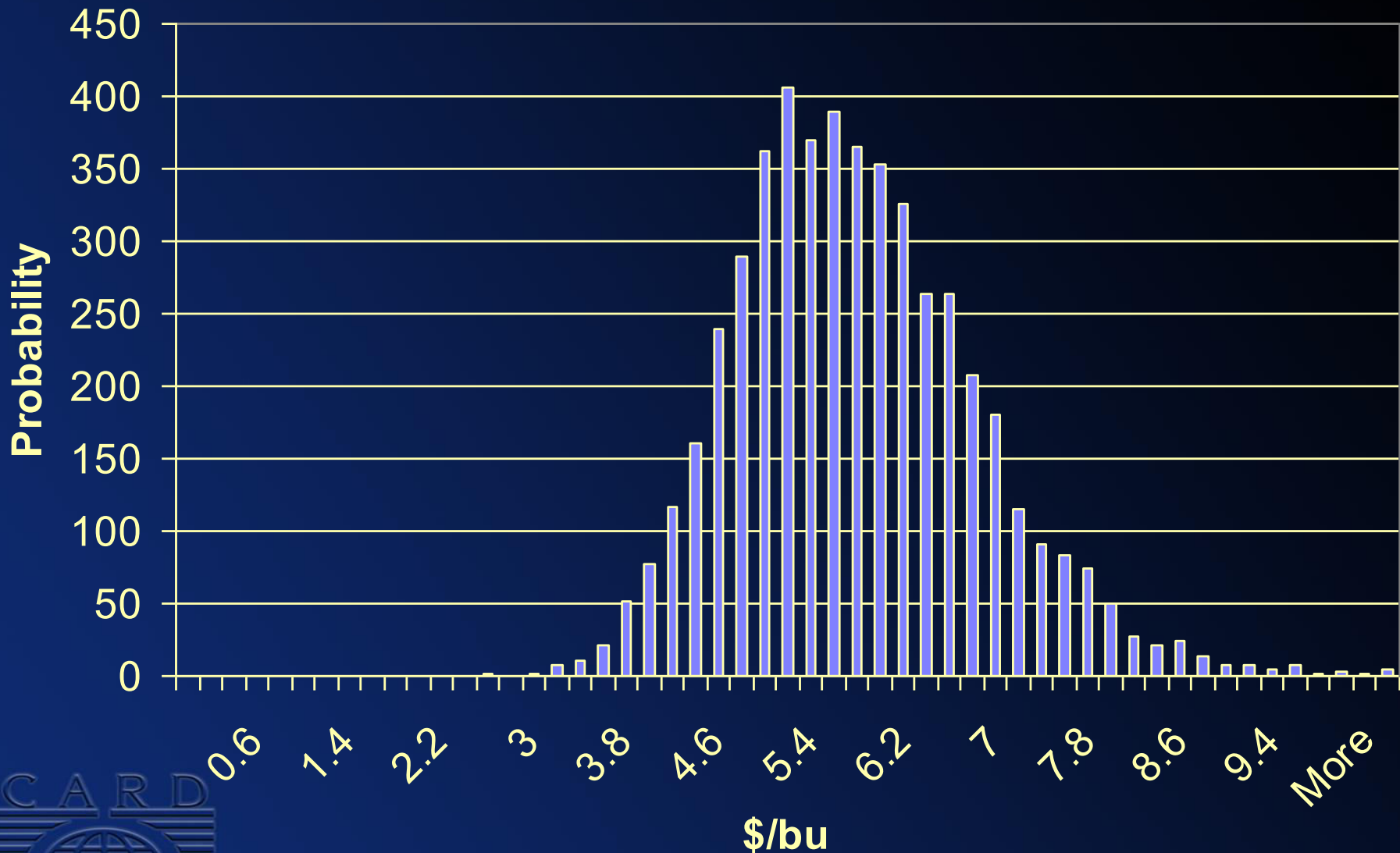


Insurance Coverage by Iowa Farmers in 2004

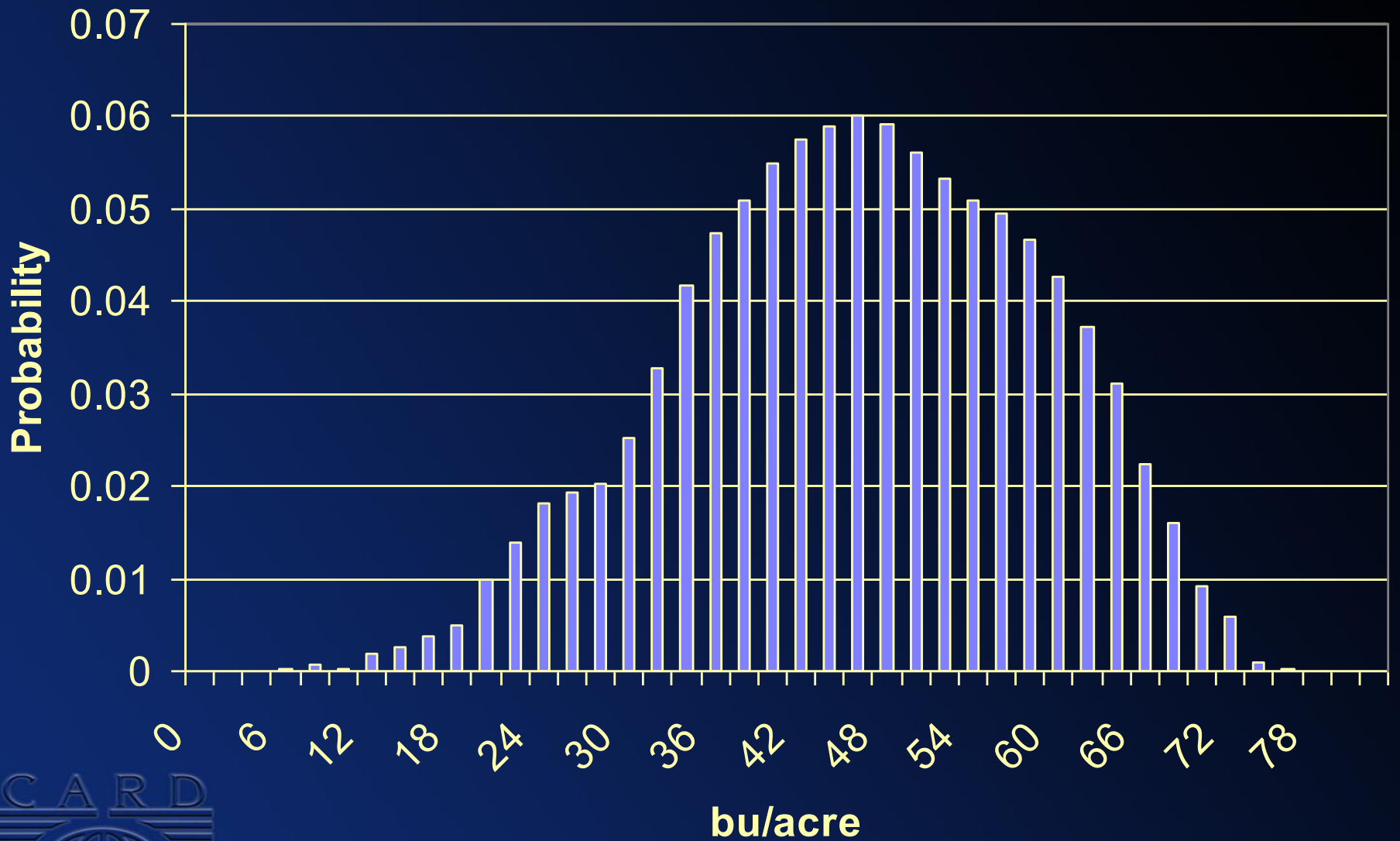


Distribution of Local Soybean Prices at Harvest 2005

Nov 2005 CBOT Price= \$5.80, Expected local basis = \$0.30)

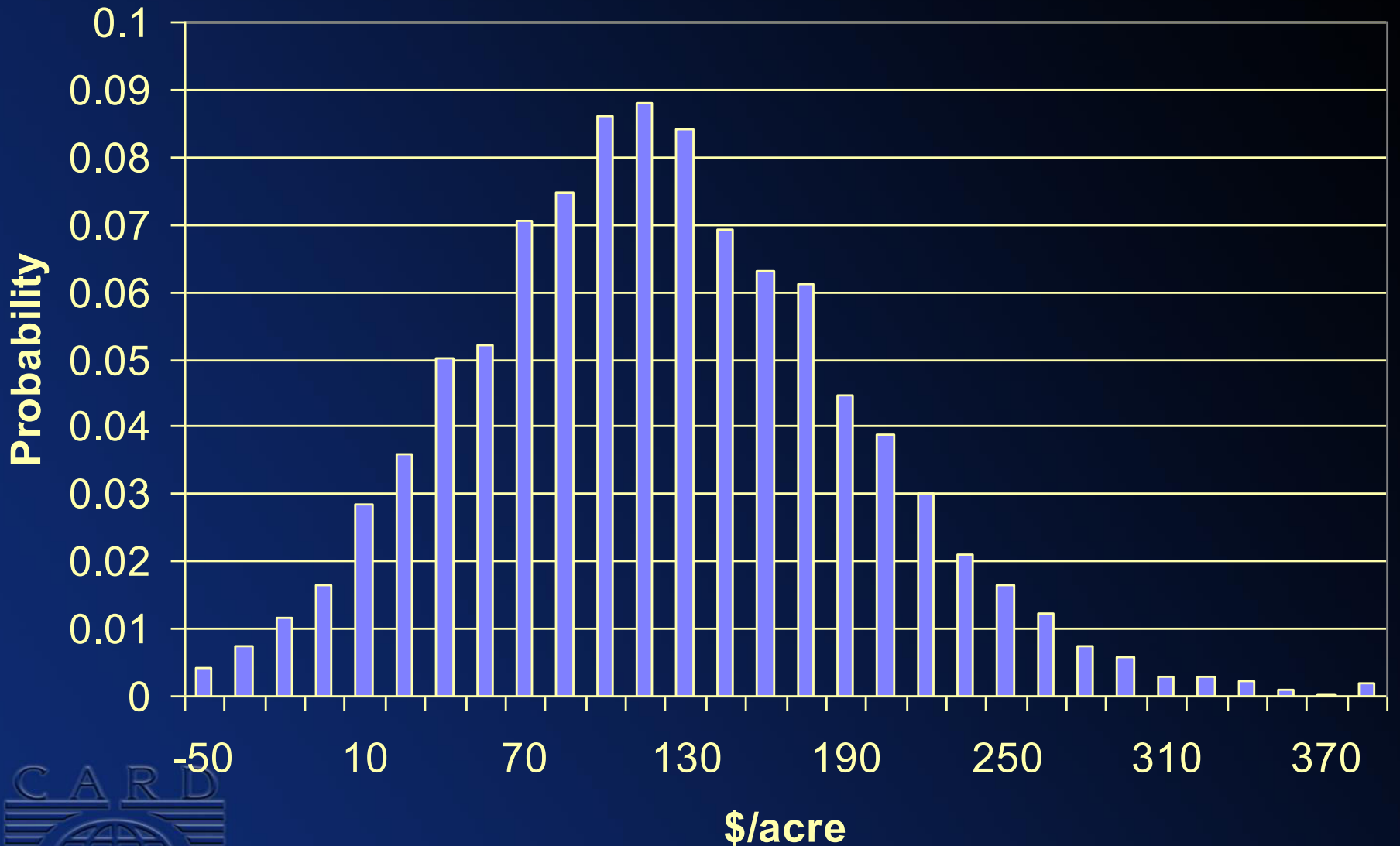


Distribution of Soybean Yields in Webster County (Expected Yield = 45 bu/ac)

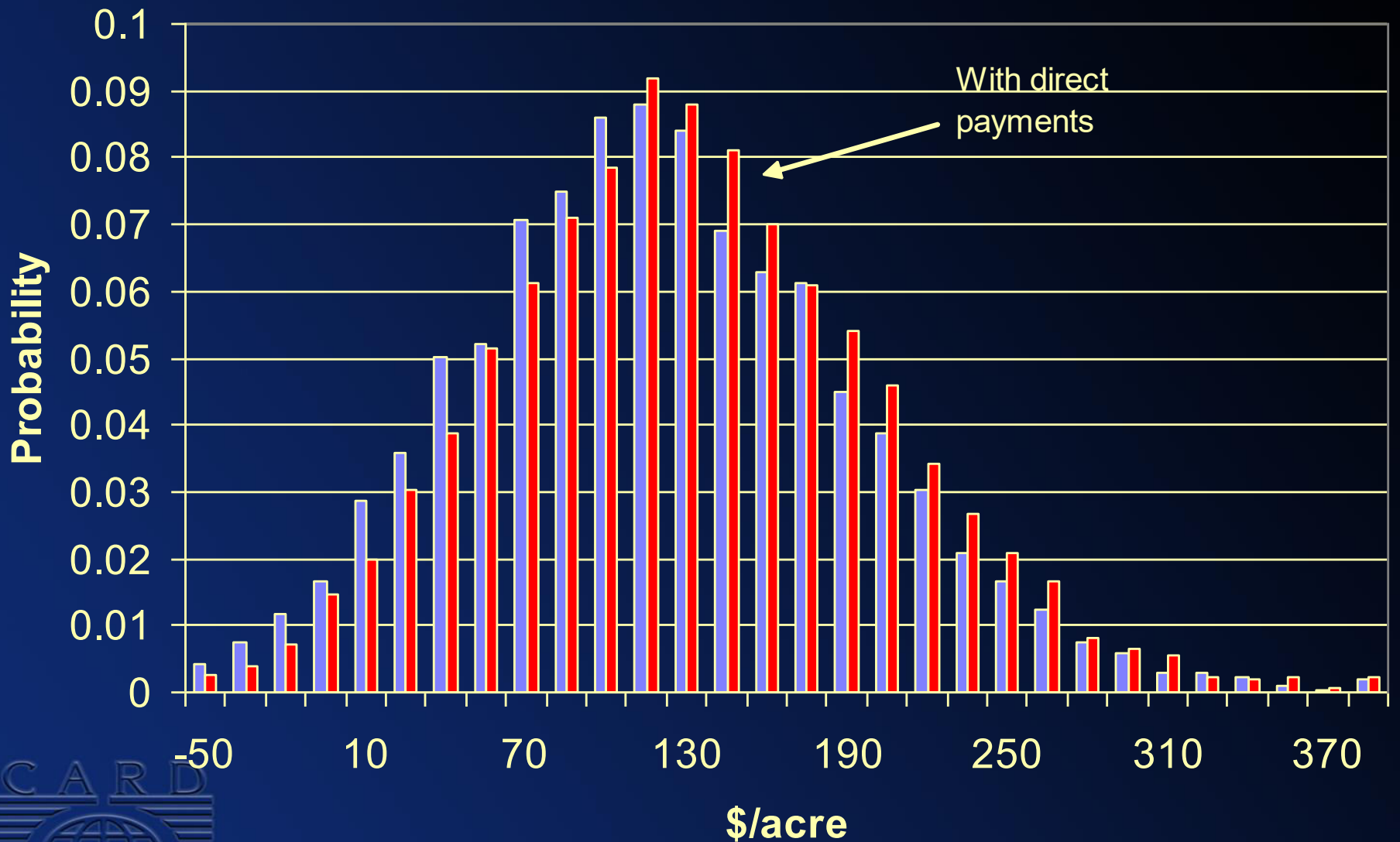


Distribution of Harvest-Time Net Market Revenue

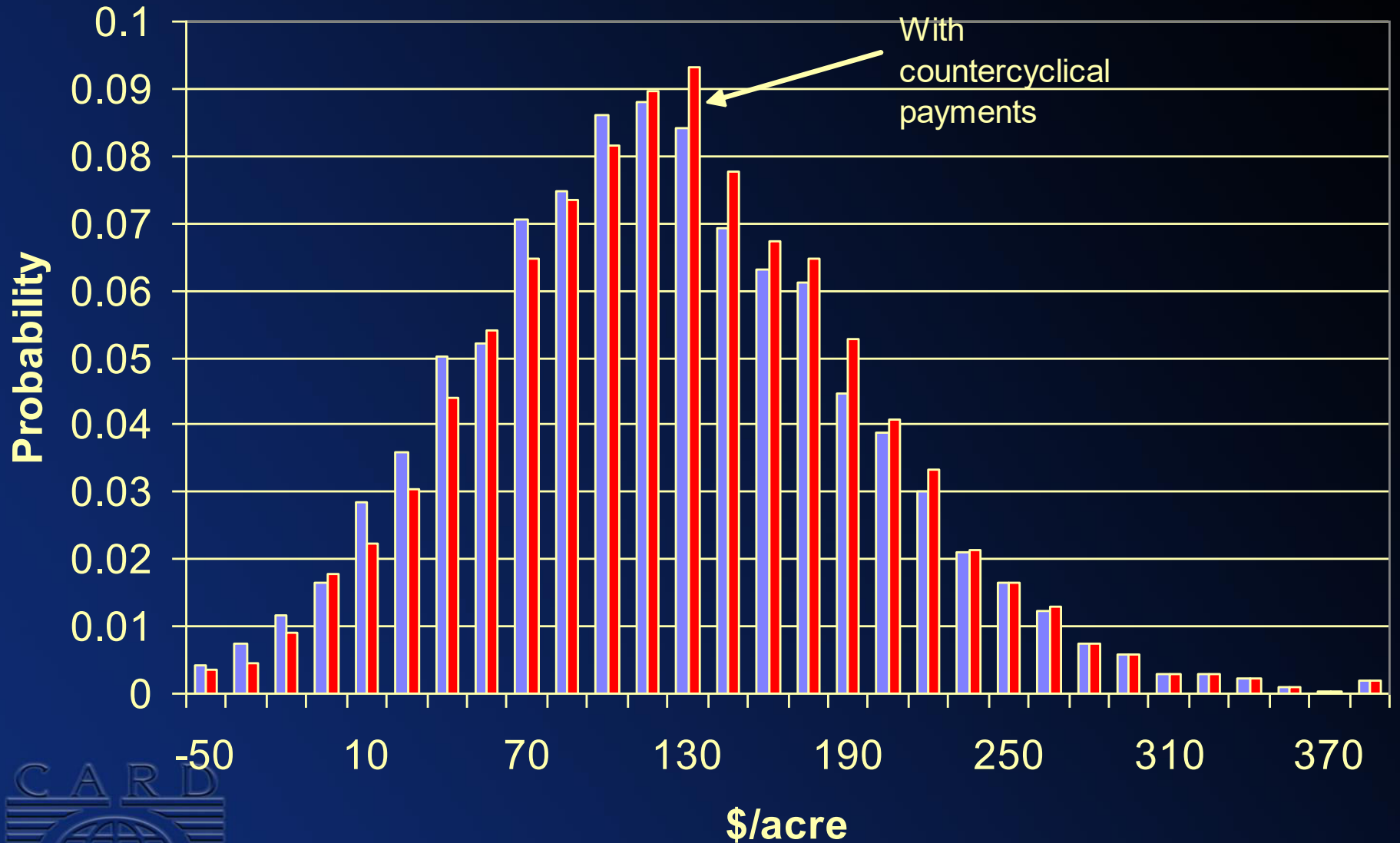
Variable Costs = \$130/acre



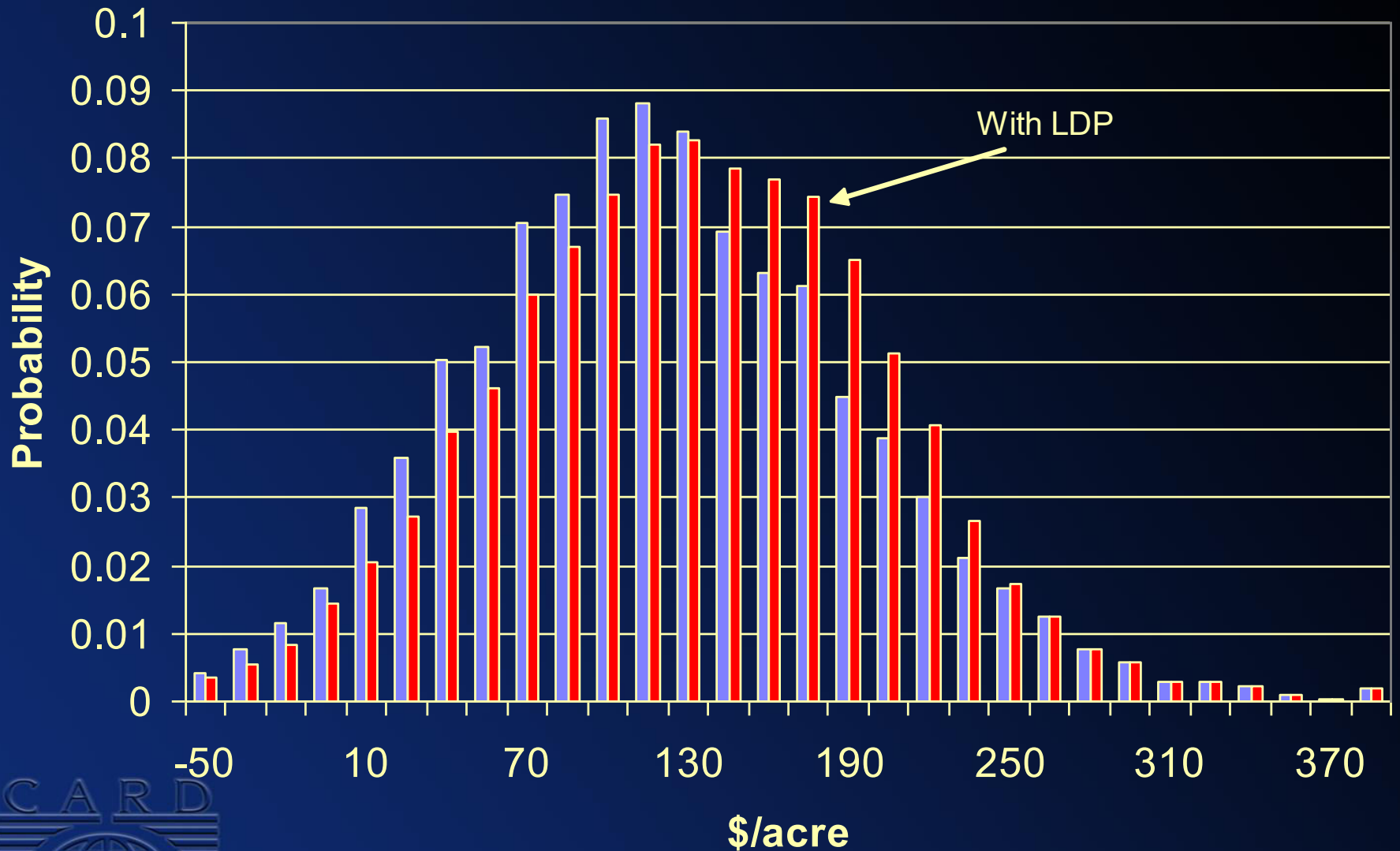
Distribution of Harvest-Time Net Market Revenue Plus Direct Payments



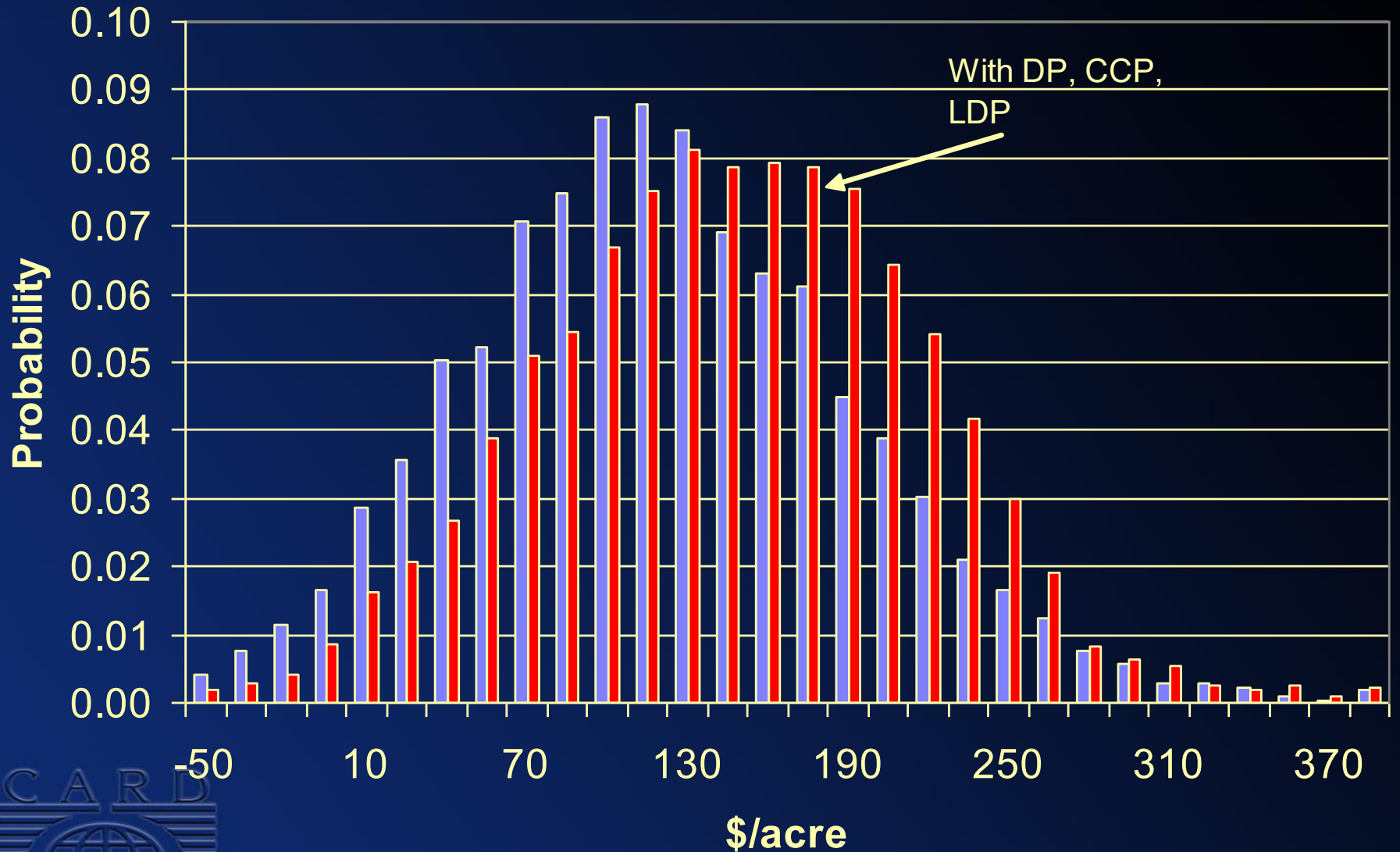
Distribution of Harvest-Time Net Market Revenue Plus CCPs



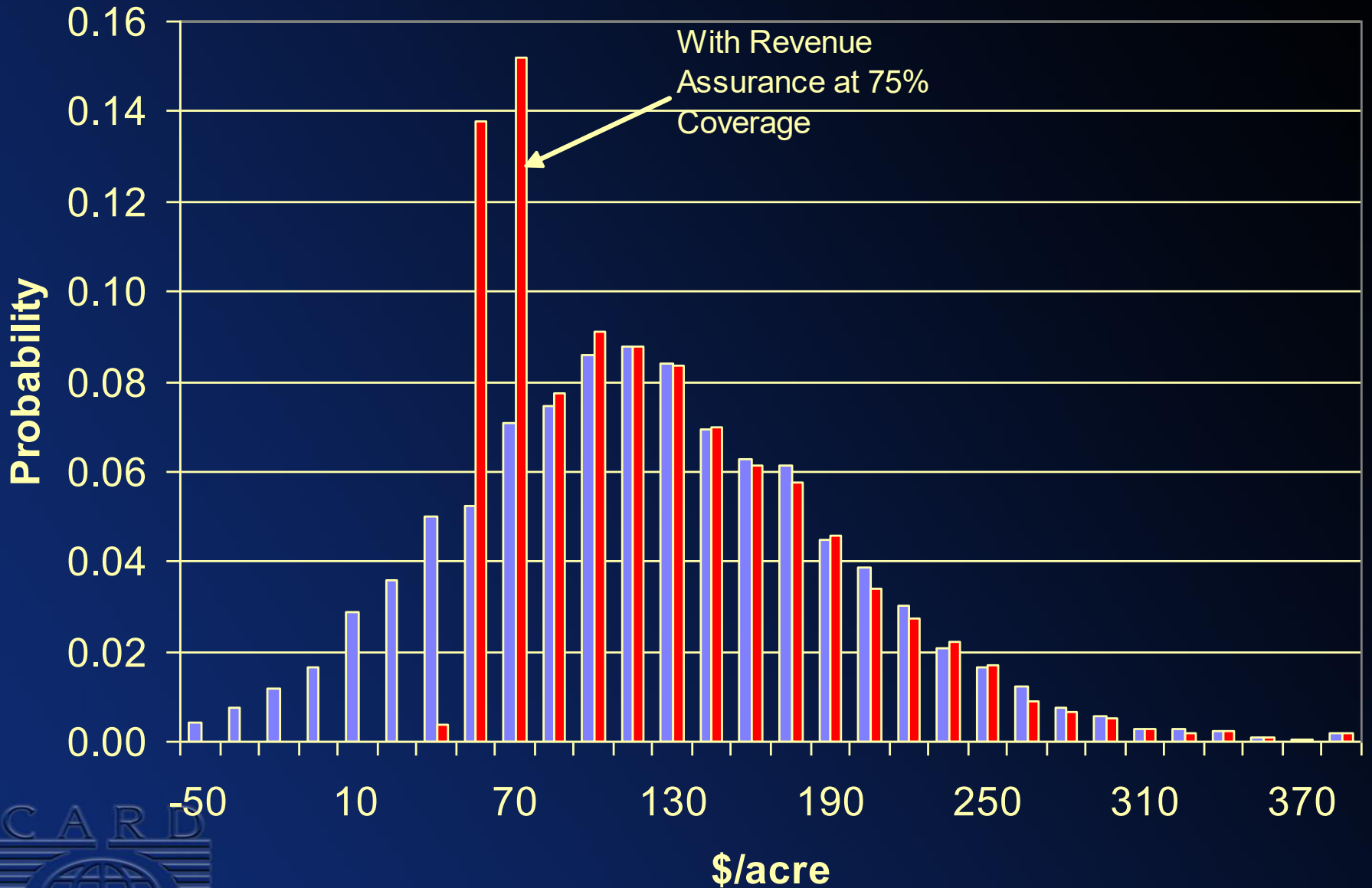
Distribution of Harvest-Time Net Market Revenue Plus LDPs



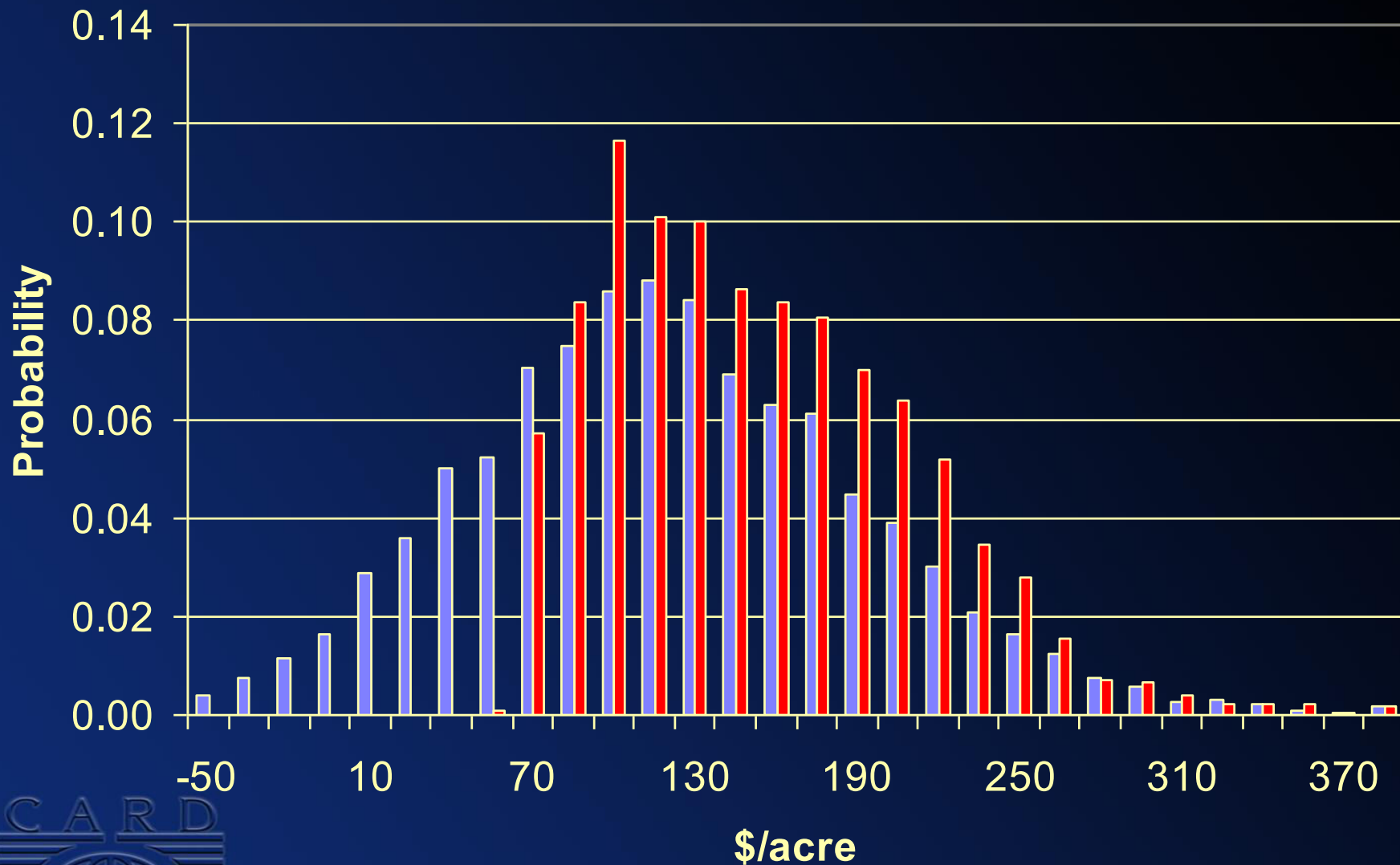
Distribution of Harvest-Time Net Market Revenue Plus DP, CCP, and LDP



Distribution of Harvest-Time Net Market Revenue Plus RA



Distribution of Harvest-Time Net Market Revenue Plus DP, CCP, LDP, and RA

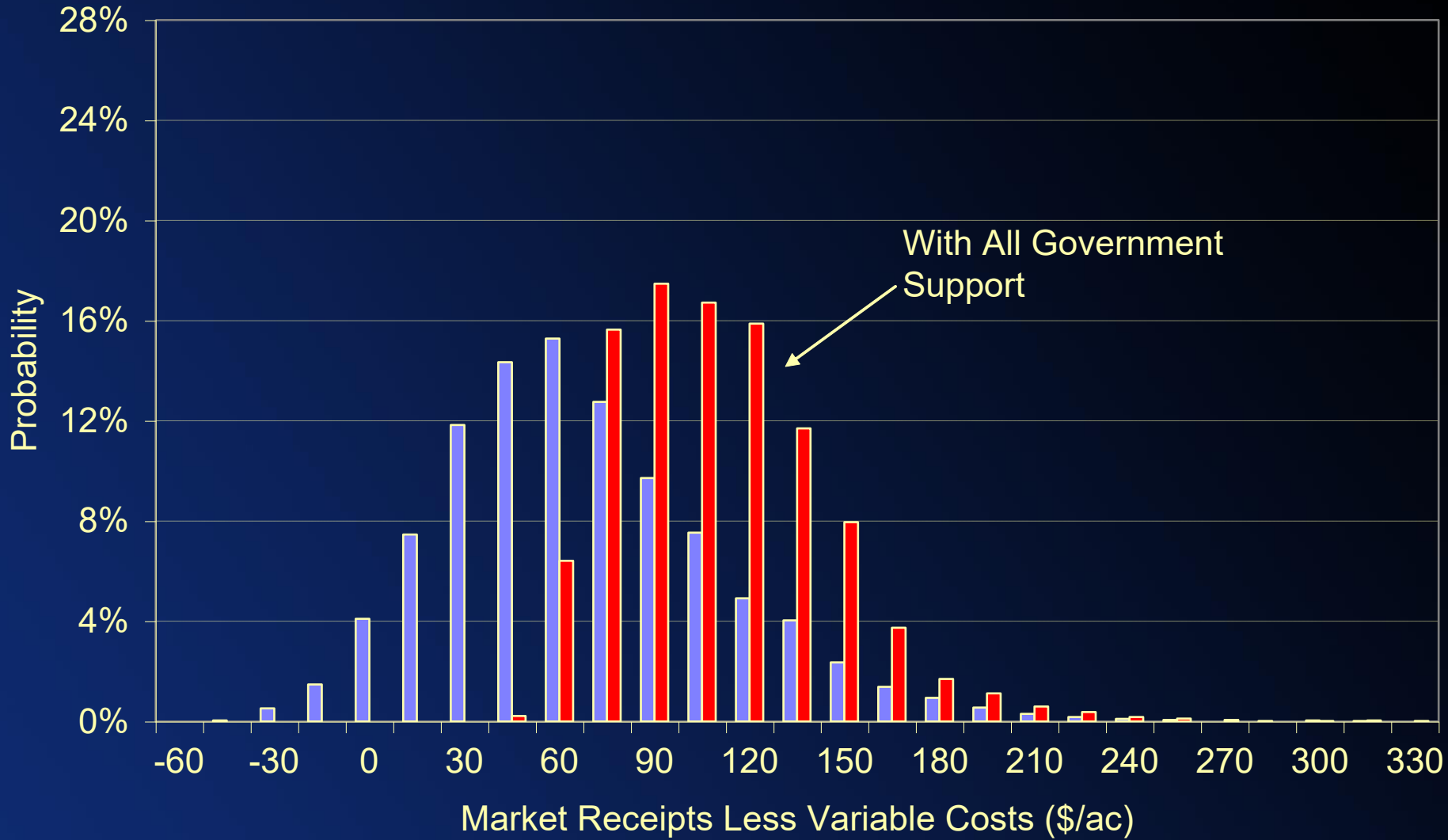


Effects of Government Programs

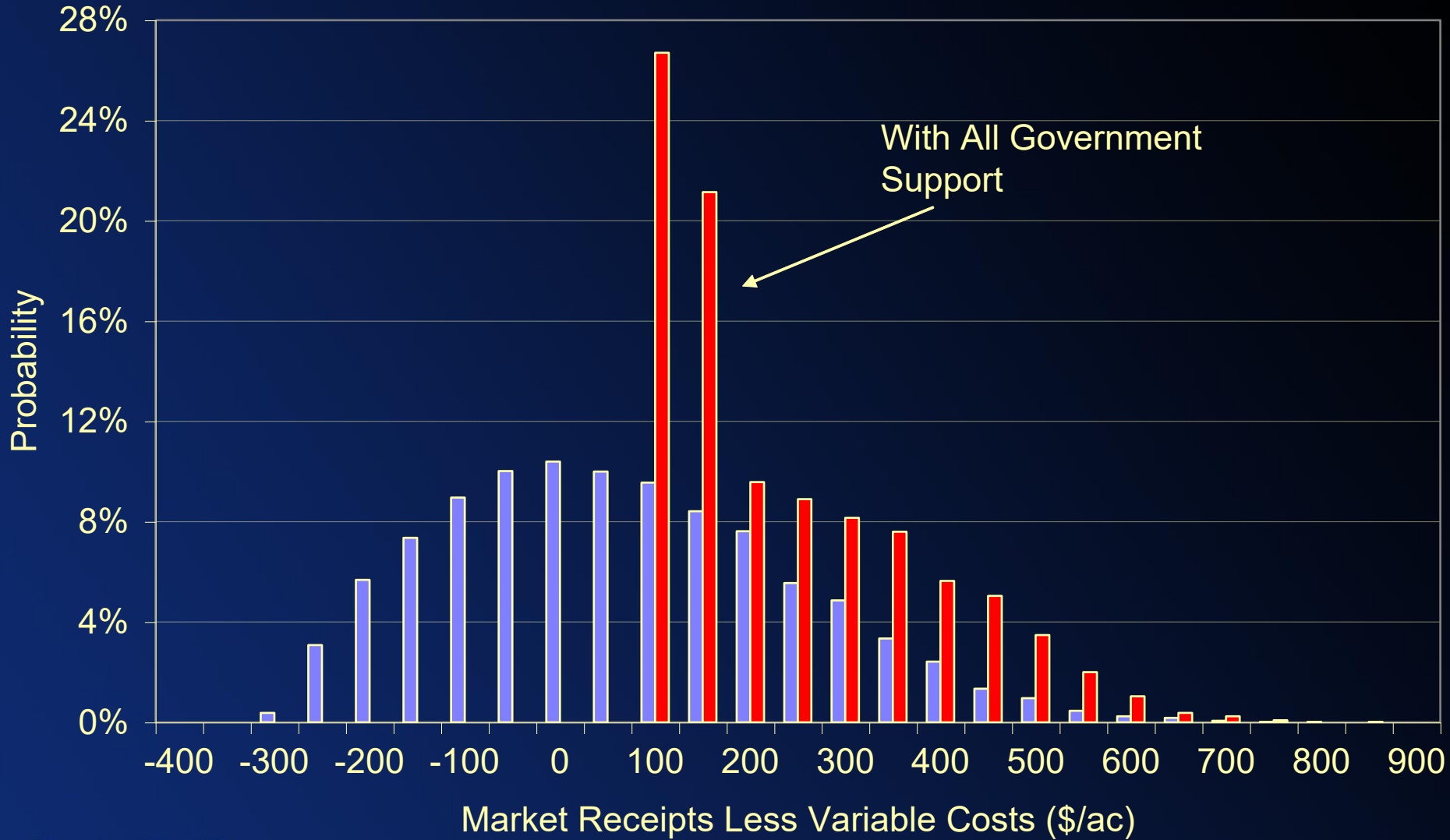
- With no government programs, probability of negative net revenue is about 5% (1 in 20 years).
- With government programs probability of net revenue less than \$60/acre is less than 1%; probability of net revenue less than \$70/acre is less than 5%.
- Average net revenue increases from \$114/ac to \$145/ac.



Effect of Programs on Wheat



Effects of Government Payments on Cotton

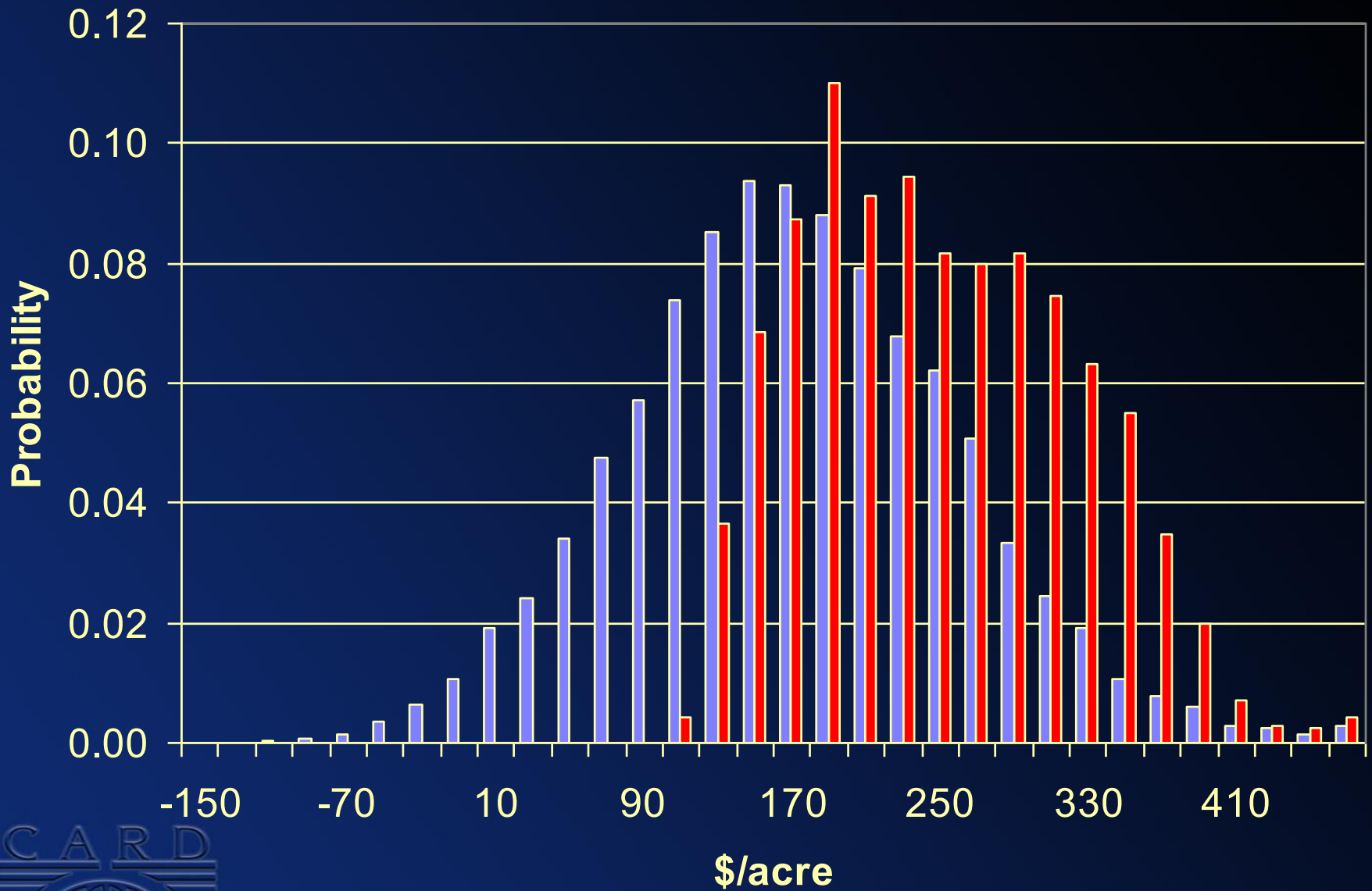


Effects of Government Programs on Iowa Cash Renters

- Cash rents will increase due to the increase in expected returns.
- Cash rent is also a variable cost of production.
- How much will cash rents increase?
 - Depends on returns to corn land.



Effect of Government Programs on Corn

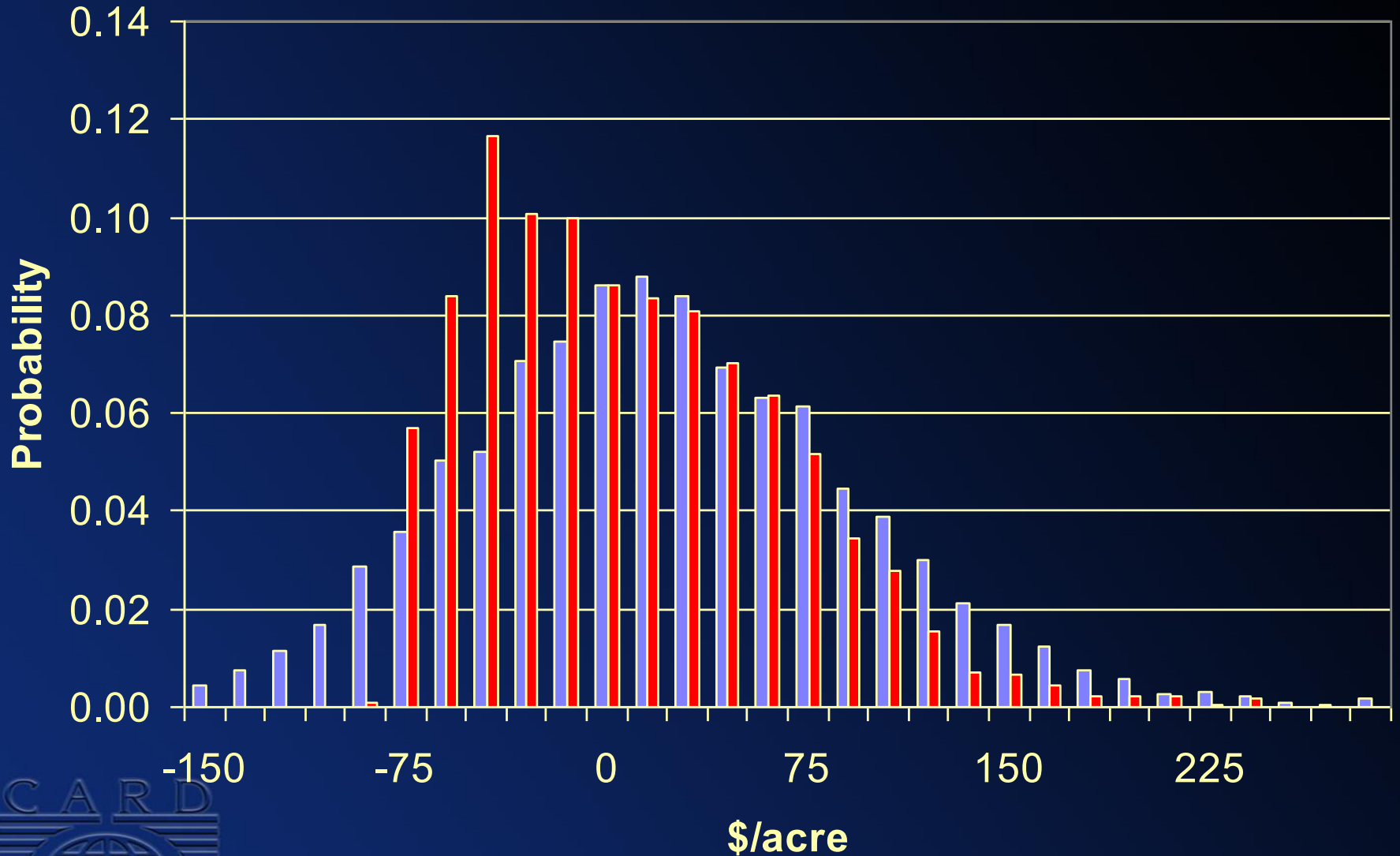


Effects of Government Programs on Iowa Cash Renters

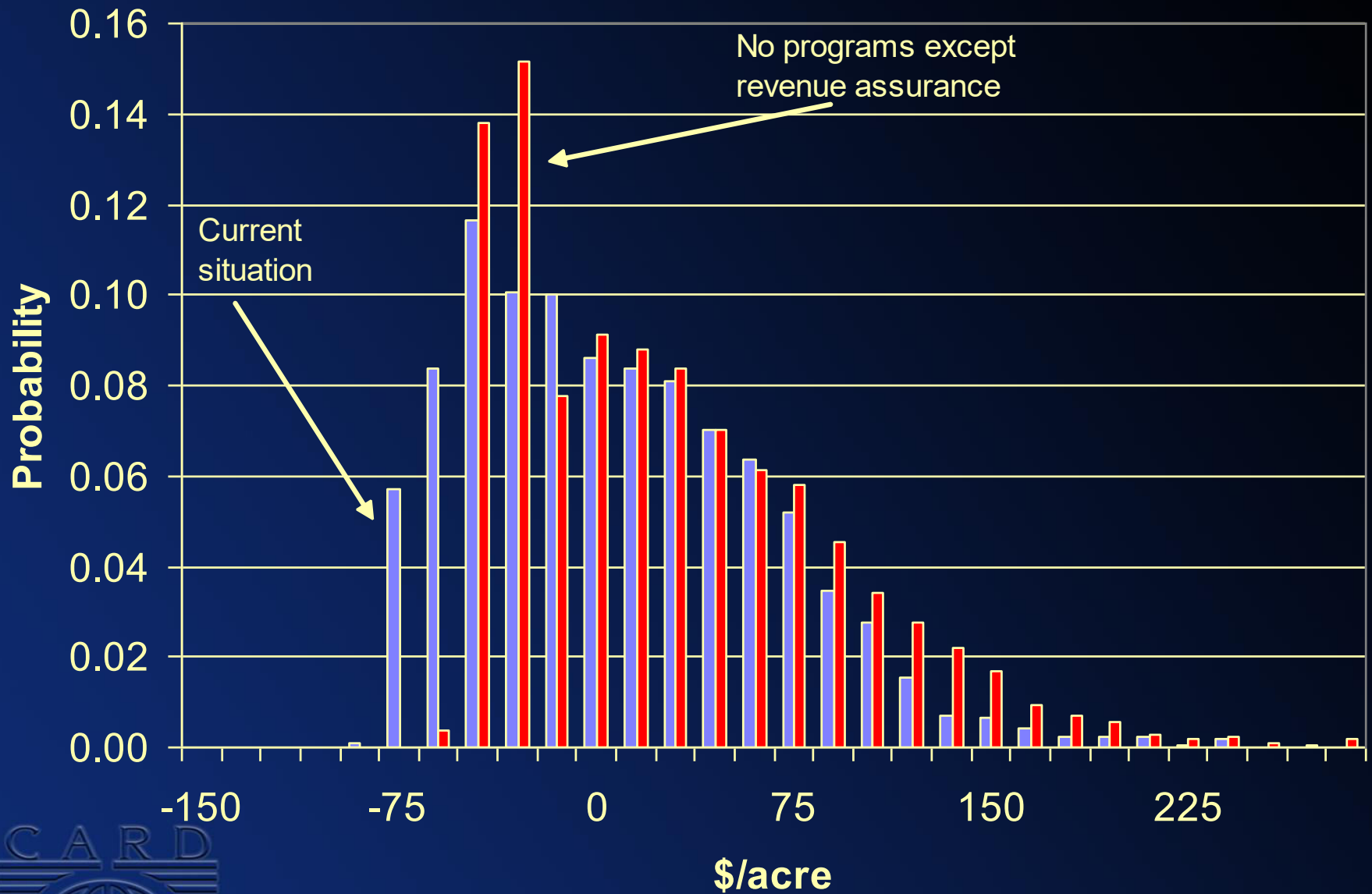
- Expected returns to corn production increase by about \$75 per acre.
- So assume that programs increase cash rents by \$50 and that cash rents for Iowa land without the programs equal \$100.



Effect of Government Programs on Net Returns from Iowa Soybean Producer Who Cash Rents Land



A Comparison of Risk and Returns for Cash Renter



Final Words

- Government programs and crop insurance greatly reduce the risk of farming for operators who farm their own land.
- It could be argued that land renters would be better off with RA and no other programs.



Implications

- Risk reduction/return increase only occurs with government programs:
 - Incentives increase to plant only program crops
 - Incentives increase to focus on maximum yield rather than maximum quality
 - Greater returns to managing commodity production rather than managing possibly new ventures