Economics of Soil C Sequestration

John M. Antle
Professor of Agricultural Economics and Economics
Montana State University
jantle@montana.edu
www.climate.montana.edu

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Farm-level decision to enter C contract

- Soil C an example of an ecosystem service
- Similar to contracts for CRP etc.
- Opportunity cost of changing practices = change in returns + other adoption & transaction costs
- For payment P ($/ha), expected sequestration rate C (MgC/ha), farmer will enter contract if
  \[ P > \frac{\text{(Opportunity Cost)}}{C} \]
- Opp Cost & C vary over the landscape so willingness to participate will vary
- Risks/uncertainties in Opp Cost, C and P
- Permanence: paying for storage (an issue for any mitigation strategy!)
Technical and Economic Feasibility

- Why offsets? Need a cost-effective, diversified strategy
- Soils: a “cup half full”, feasible now, low-cost & risk, co-benefits, no-regrets, use existing institutions & regulations
US C supply curves from studies of afforestation and crop soils
(from Pew Report)