

Beyond Profit: Adoption and Diffusion Drivers of Conservation Practices in New Mexican Farmers and Ranchers

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The American Southwest appears to be experiencing the compounding deleterious effects of both a long-run historical drought cycle and climate change. Decreasing water supplies, higher solar radiation intensities, and more frequent extreme weather events are imposing themselves on a landscape already struggling with latent degradation from nearly a century of suboptimal land management. If successful adaptation to this maelstrom were not enough, demand for higher output from agricultural acreage is only predicted to increase over the next several decades. Despite the growing interest in assisting farmers and ranchers with adoption of protective conservation practices, policymakers, legislative bodies and researchers possess few generalizable decision-making tools to guide their prioritization and funding. The dominant explanation for this from the research community centers on the heterogeneous, conflicting, and often intangible nature of farmer motivations or constraints regarding the array of conservation practices available. Dense contract design, complex funding structures, and lengthy benefits horizons for most payment schemes appear to further encumber successful adoption in a remote, dispersed, and sometimes isolated, population of rural landowners already under strain from the uncertainty of desert farming. Recent efforts to develop a streamlined, generalizable “triage” tool for assessing core adoption drivers, expected levels, and rates of a specific conservation practice in a population of rural landowners have borne fruit. Adapted from traditional employment in market research, Adoption and Diffusion Models appear to successfully predict optimal adoption behavior of conservation practices. We will attempt to calibrate a particular model previously validated in Southwestern Australia through interviews, focus groups, and surveys along with historical data from USDA’s Natural Resource Conservation Service records on a narrow set of common and emerging conservation practices now used in New Mexico ranch and farmlands. If successful, this initial investigation will serve as a guide for future research in cost-effective, low-risk, high-gain, immediate policy modification and training advice for land managers, extension agents, researchers, and policymakers.