



Historic Forage Productivity and Cost of Capital for Cow-Calf Ranches in California

Philip Brownsey, Dr. Barbara Allen-Diaz, Dr. Jose Luis Oviedo, Dr. Lynn Huntsinger and Amy Romanek;
University of California-Berkeley; Contact Author Email: rangelands@gmail.com

Much has been made of the low returns on investment for western rangeland ranching. However, no effort has been made to empirically compare these returns to the return that would be demanded by financial markets from assets with similar risk and return characteristics. This study uses historical forage productivity data from three locations in California's mediterranean rangelands to simulate financial statements for three hypothetical cow-calf ranches and measure the variability in return on investment from year to year. This performance was then compared to the actual performance of a diversified portfolio of investment assets using the Capital Asset Pricing Model, from which the theoretical cost of capital for these hypothetical ranches was derived. Much like other agricultural enterprises, cow-calf ranching in California is found to have low market risk and a low cost of capital approximately equal to the risk-free rate of return, which averaged 4.8 percent over the last 20 years, but ranged from 0.9 to 9.7 percent. However, this cost of capital is still significantly greater than the historical return on cow-calf ranching in the western U.S. of 2 to 3 percent, implying that ranchers are receiving benefits from their business beyond financial returns.

2009. 62nd Society for Range Management Annual Meeting. Paper No. 30-7.