



Impact of Probability of Well Success on Unit Cost of Irrigation in Karnataka

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Abstract: The negative binomial probability of drilling a successful well in hard rock areas of Karnataka is estimated to be around 0.3, which has fallen from 0.60 during the 1990s. By incorporating the weighted probability of well success and failure, it has been estimated that out of the total investment on drilling and casing of irrigation well in hard rock areas, the investment on failed wells formed around 70 percent of the total investment. Thus, by improving the probability of well success by adopting sustainable cropping pattern and suitable coping mechanisms such as drip irrigation, recharging of borewells, sharing of borewell among siblings, substantial investment on failed wells could be saved which is worthwhile for small and marginal farmers. The current unit cost of well irrigation by NABARD underestimates the loan sanctioned to the tune of 60 per cent, which imposes substantial costs on marginal and small farmers. It is therefore crucial to revise the methodology of estimating unit cost by NABARD as proposed in this study.

Keywords: Borewell irrigation, Cost of drilling and casing, Negative binomial distribution, Probability of well success
