



## NET REVENUE INSURANCE FOR BEEF IN REGION IV-A (CALABARZON)

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**ABSTRACT** – The cattle industry was identified as one of the least developed industry in the country due to numerous risks that greatly affect the cattle farmers' income, including market risks such as sudden movements in livestock and feed prices. In this study, we priced an insurance policy designed for cattle farmers in Region IV-A (CALABARZON) to insure their average net revenue. We model the behavior of the gate price of cattle for slaughter and the price of feeds consumed by the livestock and consider the revenue as the primary factor in designing an insurance using the Principle of Net Revenue Insurance. We consider a Net Revenue Insurance in the form of a path dependent option in which the payoff depends, not on the values of livestock and feed prices on a given day, but on the path that prices take over the life of the option or insurance product. An Asian Option is used to insure the expected average revenue of cattle farmers. Monte Carlo simulation is used to price the option. Prices of the resulting Asian Option are calculated using different time intervals, risk-neutral interest rates and initial prices.

*Keywords: Asian Option, Livestock Insurance, Revenue Insurance*



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