

# **Agricultural Risk Management Using NDVI Pasture Index-Based Insurance for Livestock Producers in South West Buenos Aires Province**

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Roberto Darío Bacchini<sup>\*</sup>, Daniel Fernando Miguez<sup>†</sup>

Drought and other climatic events affect the production of natural pastures in the Southwest of Buenos Aires Province in Argentina (SWBA), causing a major impact on livestock production and activity at a regional level, generating unfavourable dynamic effects in the medium and long term on the economy. The lack of coverage options exposes producers to recurring situations of loss of productive capital and financial constraints that affect their maintenance in the region when catastrophic and/or extended in time adverse events take place. NDVI Index-based Insurance developed by the Ministry of Agriculture, Livestock and Fisheries of Argentina (MAGyP) with technical assistance of the World Bank (WB), arises as a plausible coverage option in which efforts at the private, provincial and federal levels may converge as a concrete alternative. The aim of this study is to evaluate the out-of-sample performance of the NDVI Index-based Insurance in some Departments of SWBA, by calculating the technical premium with the methodology developed by MAGyP-WB and NDVI information up to 2007, and analyzing the results that would have been obtained in 2008 and 2009. Moreover, with the available NDVI information (1982-2009), the rating of the contract is carried out and the reasonability of the premium payment is analyzed through a comparison of the frequency and severity of payouts in the NDVI coverage with the losses suffered by droughts in SWBA, as measured by climate data and water balance indexes as well as by economic losses by reduction in livestock herd.

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<sup>\*</sup> Actuary, University of Buenos Aires. M.Sc. in Finance, University of San Andrés. Short Term Consultant at World Bank in Agricultural Index Insurance projects for Latin America and Caribbean.

<sup>†</sup> Economist, M.Sc. in Government Economy, University of Buenos Aires. Agricultural Risk Management and Insurance Consultant.