World Academy of Science, Engineering and Technology
International Journal of Economics and Management Engineering
Vol:18, No:09, 2024

An Approach to Practical Determination of Fair Premium Rates in Crop Hail Insurance Using Short-Term Insurance Data

Authors : Necati Içer

Abstract : Crop-hail insurance plays a vital role in managing risks and reducing the financial consequences of hail damage on crop production. Predicting insurance premium rates with short-term data is a major difficulty in numerous nations because of the unique characteristics of hailstorms. This study aims to suggest a feasible approach for establishing equitable premium rates in crop-hail insurance for nations with short-term insurance data. The primary goal of the rate-making process is to determine premium rates for high and zero loss costs of villages and enhance their credibility. To do this, a technique was created using the author's practical knowledge of crop-hail insurance. With this approach, the rate-making method was developed using a range of temporal and spatial factor combinations with both hypothetical and real data, including extreme cases. This article aims to show how to incorporate the temporal and spatial elements into determining fair premium rates using short-term insurance data. The article ends with a suggestion on the ultimate premium rates for insurance contracts.

Keywords : crop-hail insurance, premium rate, short-term insurance data, spatial and temporal parameters
Conference Title : ICARMCI 2024 : International Conference on Agricultural Risk Management and Crop Insurance
Conference Location : Hong Kong, China
Conference Dates : September 26-27, 2024