

Study of Performance of Weather Index-based Crop Insurance

Case study: Rainfall Index-based Insurance for Dry land (non irrigating) Wheat Production in the City of Dargaz

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Abstract

The Necessity for supporting agricultural products, against natural disaster and other natural factors which are out of control of the farmers, is well known to every one. Agricultural insurance is one of the ways to support this sector. Also, Among the crops, wheat is one of the most important products, particularly in terms of economic and practical. In this regard, to increase the efficiency of crop insurance policies, instruments and a range of innovations, based on statistical indicators, which are used is one of the most efficient in Weather index-based crop insurance. This research emphasize on one of the most comprehensive risks of dry land wheat that is drought factor, hence variable rainfall and wheat yield during a statistical period between the years 1994-1995 to 1995-2011 in city of Dargaz, Khorasan Razavi province have been assessed. The change of performance in this statistical period, and the influence of rainfall on the yield was analyzed using statistical analysis software. For wheat yield prediction using software SPSS, regression models were applied that between the selected regression model, only the weighted regression model, was sufficiently accurate in which the correlation of wheat yield and rainfall reached to 98 percent. While in other models, correlation, up to 73 percent. the this model, Decline in performance against low rainfall calculated and then rainfall index for using for wheat crop insurance and its premium was calculated.

Keywords:

Weather Index-based Insurance, Dry land Wheat, Rainfall Index, Performance Prediction, Premium Calculation.

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