Master Thesis Abstract

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Title of the Thesis	:	**"ECONOMIC ANALYSIS OF CROP INSURANCE SCHEMES AND PAYOUTS IN SUSTAINING RICE PRODUCTION DUE TO CLIMATE CHANGE IN THE KRISHNA RIVER BASIN OF ANDHRA PRADESH"**
Degree to which it is submitted	:	**Master of Science in Agriculture**
Faculty	:	**Agriculture**
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The agriculture is subjected to vagaries of adverse weather conditions which results in volatility in farm production and income which in turn may adversely influence the food security of nation. Hence, there is need to give adequate attention to tackle the problems arising from different risks such as production risk, price risk, financial risks etc. Risk management strategies like different financial risk transfer products will provide resilience mechanism system in agriculture and will enable to continue agricultural production over extended period of time.

The objectives formulated for assessing the role of crop insurance in sustaining paddy production are as follows:

1. to study the present status of the insurance schemes in the study area and analyse the major constraints faced by the farmers and insurance companies,

2. to assess the farmers' willingness to pay for the weather based crop insurance and the factors responsible for it, and

3. to establish distribution for payouts structure and rainfall insurance policies offered to farmers in the study area.

The study was conducted in Nagarjunasagar Right Canal (NSRC) command area of Guntur district and pertains to the agricultural year 2010. Both primary and secondary data were used for present study. Multistage sampling design was adopted to obtain a representative sample of 240 paddy farmers and primary data were collected through a well structured interview schedule. The Double bound dichotomous model of contingent valuation method was used to elicit farmers Willingness-to-Pay (WTP) for weather based crop insurance scheme (WBCIS). Statistical tools used in data analysis were compound growth analysis, loss ratio, break-even ratio, arithmetic mean, standard deviation, frequency and percentage, percentile and percentile ranks, and log-likelihood model. The log-likelihood model was estimated using 'STATA' data analysis software tool pack which uses a maximum likelihood method of estimation.

The study revealed that farmers do not have in-depth awareness about crop insurance scheme. The coverage of non-loanee farmers in the state is very low as compared to loanee farmers. The financial viability of National Agricultural Insurance Scheme (NAIS) is very poor as it assumes loss ratio greater than 'one' for overall figure and for paddy alone in state but the financial viability of scheme is considerably good in Guntur district. The compound growth rate in number of paddy farmers and paddy area covered under NAIS is low in state and need to increase it. More number of farmers are not interested to take part in crop insurance as it does not pay out even if they incur yield loss. Distribution of payouts structure of WBCIS for red chilli (irrigated) is such that it pays out in extreme weather events of heavy rains, severe drought and high relative humidity over extended period of time. The farmers' WTP for WBCIS scheme is about 4.73% of sum insured for paddy. Among the major factors affecting farmers' WTP are farmer age, education and awareness about crop insurance.

The present study suggests for re-insurance facility for Agriculture Insurance Company of India Ltd. (AIC) from government, mass awareness programme planning, no-claim bonus for the farmer if insured farmer was not eligible to get compensation for consecutive three years, revision of NAIS structure, revision of strike levels and distribution of compensation per 'mm' deficit or excess rainfall in WBCIS, and fixing premium rates for WBCIS at around 5% of sum insured.