New approaches to crop yield insurance in developing countries

Skees, Jerry R.; Hazell, Peter B.R.; Miranda, Mario J.

Natural disasters can be extremely disruptive to farmers and to others whose incomes depend on a successful crop. Society can gain from more efficient sharing of crop and natural disaster risks. However, the costs associated with traditional agricultural risk programs have historically exceeded the gains from improved risk sharing. This paper explores government intervention in agricultural risk markets and discusses new approaches to risk sharing with limited government involvement. In particular, we build the case for introducing negotiable state-contingent contracts settled on area crop yield estimates or locally appropriate weather indices. These instruments could replace traditional crop insurance at a lower cost to government while meeting the risk management needs of a wider clientele.

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These instruments could replace traditional crop insurance at a lower cost to government while meeting the risk management needs of a wider clientele. This paper explores government intervention in agricultural risk markets and discusses new approaches to risk sharing with limited government involvement. In particular, we build the case for introducing negotiable state-contingent contracts settled on area crop yield estimates or locally appropriate weather indices. These instruments could replace traditional crop insurance at a lower cost to government while meeting the risk management needs of a wider clientele. Suggested Citation. Skees, Jerry & Hazell, P. B. R. & Miranda, Mario, 1999. Smallholder farmers in developing countries are particularly vulnerable. This is due to various factors: x Production often in more exposed areas, e.g. disadvantaged and mountain regions, marginal land In many developing economies, farmers retain the risk of crop losses and epizootic diseases irrespective of the size of their farms. Their risk management mainly consists of diversifying their income sources by planting a variety of crops and breeding cattle. They have hardly any risk-transfer tools, which in turn limits the availability and range of agricultural production finance offered by banks. This situation has not changed with the development of microfinance and microinsurance over the last decade. Traditional insurance is impractical in developing countries because of high transaction costs, adverse selection, information asymmetry, poor distribution, and other challenges which hinder the availability of protection (Skees, 2008). Furthermore, post-event response in the form of emergency aid, debt forgiveness, and grants are at risk following recent economic crises, and such public capital does not usually help create independent private solutions and can be inequitable and untimely. Page 55. remote sensing via satellite imagery, are new ways being piloted to help inform area yield estimations and make them more reliable. Selection of Crop Region. Crop yield prediction, which provides information to decision makers, is important in many ways to the economy.