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Farm Level Knowledge, and Adaptation to Climate Change

-Evidence from China

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Poster prepared for presentation at the Agricultural & Applied Economics Association's 2017 AAEA Annual Meeting in Chicago

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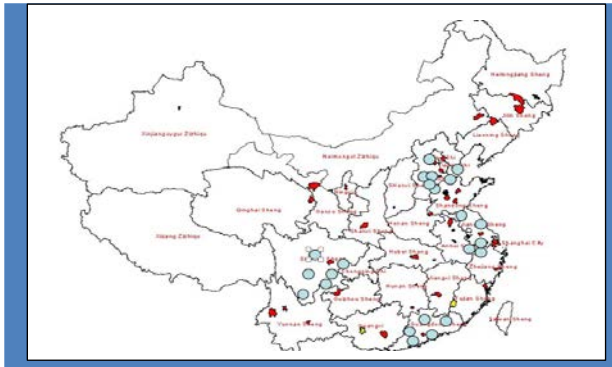
BACKGROUND

Agricultural sustainability is critical for the long-term health of our environment and society. Climate change presents unique challenges to the resilience of China's agriculture, that farmers and policy makers must respond to with effective adaptation strategies. And climate change mitigation and adaptation also are of great concern to ensure food security for the growing population and improve the livelihoods of poor smallholder producers. Consequently, extrapolation from panel data to check farmer adaptation is required

The aim of this paper is to investigate the farmer's knowledge and adaptation behavior for climate change in Rural China, taking into account the statistical complications present in existing studies.

The specific questions we asked: 1. What are adaptation responses of rural households to climate change impacts? 2. What constraints or barriers do rural households perceive for adaptation to climate change? 3. How do risk perception and other factors influence adaptation?



DATA:

With support from National Social Science Foundation of China, this paper addresses issues of Chinese farmers' response to climate change. Quantitative surveys supplemented by qualitative interviews were used for data collection. A questionnaire survey was conducted in different provinces of China to assess agronomic practices of smallholder farmers, adaptation strategies and how climate change awareness and perceptions influence the farmers' choice of agronomic practices.

Descriptive analysis:

Rural households' adaptation strategies to climate change

(will be filled…)

Regression results

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Results suggest that farmers in rural China are not able to detect climate change correctly. They tended to confuse climate and weather and mismatched causes and mitigation measures of climate change. They perceived high risk, but were only moderately concerned about risk of climate change. The different environmental conditions of the area were found to significantly influence peoples' climate change knowledge, risk perception, concern and adaptation behavior. Family income, education, and to some extent climate change knowledge were observed to contribute positively to risk perceptions. Similarly education, income, size of land were significant determinants of rural households' adaptation choices. Risk perception and concern found to be positively related to climate change adaptation, but they were not a significant player in deciding rural households' adaptation options. Also access to credit, climate change information and new farm technologies would enhance rural households' ability to adapt climate change effectively.