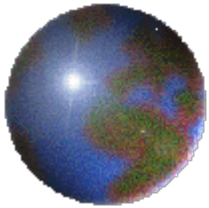




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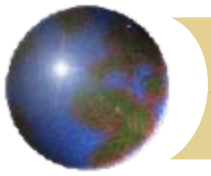


# *Challenges Facing Crop Insurance in China*

Dr. Milton Boyd, Professor & Economist

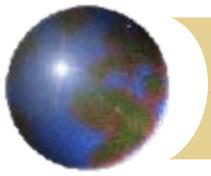
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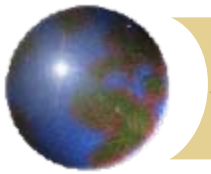
## *Outline...*

1. Moral Hazard
2. Adverse Selection
3. High Administration Cost
4. Sufficient Demand for Crop Insurance? Do a Survey
5. High Correlations of Losses Within Provinces - Weather



# 1. Moral Hazard

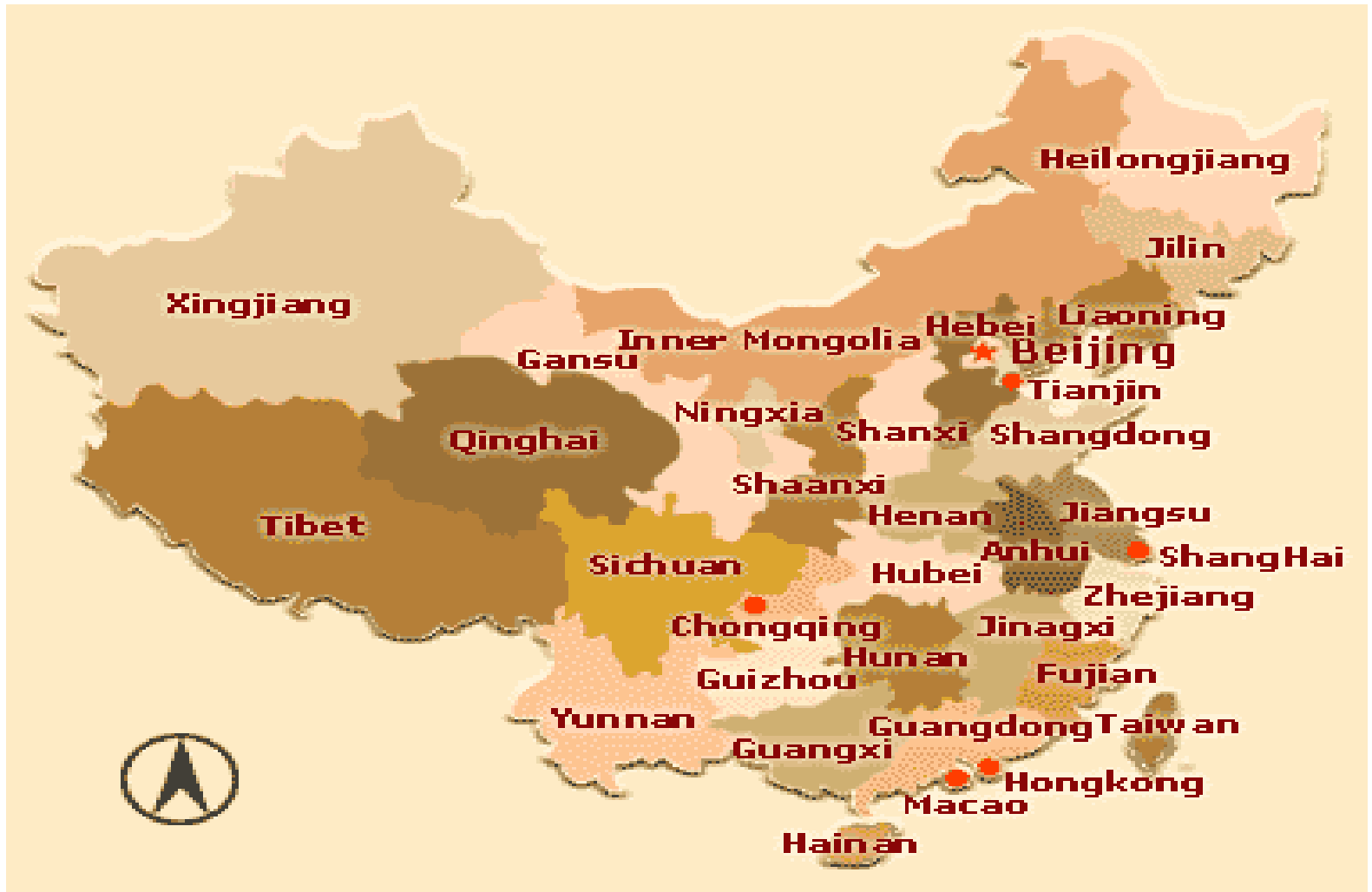
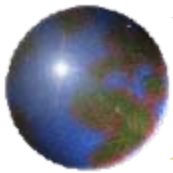
Problem of moral hazard  
(farmers with insurance may be less careful, driving up the cost of insurance...so insurance fails)

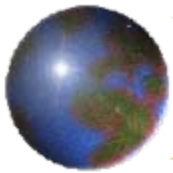


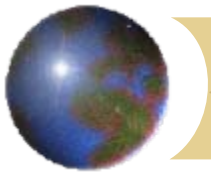
Solution...

investigate with survey, ...

insurance company can 1) penalize  
farmers if making more claims 2)  
reward farmers who make fewer claims



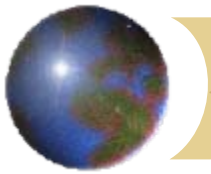




## 2. Adverse Selection

Problem of adverse selection (where only farmers with highest crop losses seek insurance and drive up the cost of insurance....too few farmers participating and administration cost becomes too high, and insurance fails)

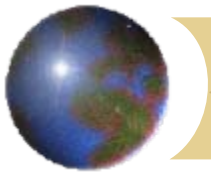
Solution....design a good crop insurance program to get a farmer high participation rate, include both high and low risk farmers



### **3. High Administration Cost Problem**

(costly measuring of losses due to many small farms, also fraudulent losses....this causes higher premium cost)

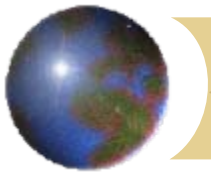
solution...1) involves gaining high participation rate, low sales and marketing costs, lower the costs for measuring losses, lower the fraud and cheating...would like admin cost less than 5% of premium 2) have some farmers buy insurance in larger groups e.g. village, cooperative



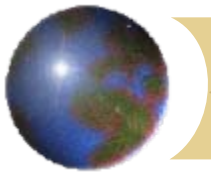
## **4. Is There Sufficient Demand for Crop Insurance in China?**

Solution...Need to Do a Demand Survey

- a) Demand for Crop Insurance Depends on:
  - i) amount of yield risk (variation)
  - ii) level of risk aversion of farmers

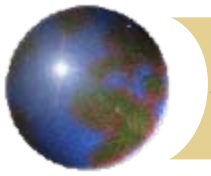


- ii) Suitable crop insurance policy characteristics for farmer
- iv) price – are farmers willing to pay for the cost of weather insurance? *If not, gov't subsidy is needed*
- v) Farmer socio-demographics (age, income, education, farm size, family size, type of farm/crops, etc)
- vi)...and other factors



## **5. Problem for Crop Insurance Seller: High Correlations of Losses Within Provinces Because of Similar Weather (unlike insurance for car, house, etc)**

Solutions: 1) Include more crops 2) Include all provinces in national pool, but each province may think their premiums are too high, if no payout ... or 3) Increase reserves or buy reinsurance or take out loans for deficit...4) trade crop insurance risk with other insurance firms for other types of risk (e.g. car insurance)



.....*Thank you!* 谢谢!