ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Risk Management in Agriculture

A Holistic Approach

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Context & Outline

Recent developments:

- Price volatility, Economic Crisis, Climate change concerns

Recent major changes in agricultural OECD policies:

- 2008 US Farm Bill, Canada's Growing Forwards Framework, Mexico increasing support to price hedging, Australian on-going revision of drought policy , EU's CAP Health Check

Outline:

1. A holistic approach to Risk Management in Agriculture
2. Policy Guidelines and dilemmas derived from a holistic analysis

There are many Sources of Risk in Agriculture…

Level of Effects Type of risk	Micro (Idiosyncratic) Individual household	Meso (Covariant) Communities	Macro (Systemic) Regions or Nations
Market / Prices		Changes in price of land, new requirements for food industry	Changes in Input / output prices due to shocks, trade policy, new markets…
Production	Hail, frost, non-contagious diseases, personal hazards, assets risks	Rainfall, landslides, pollution,	Floods, droughts, pests, contagious diseases, technology
Financial	Changes in non-farm income		Changes in interest rates / value of farm or financial assets
Institutional / legal	Liability risk	Changes in local policy or regulations	Changes in policy and regulations, environmental law, agricultural payments

Source: OECD Secretariat, adapted from Hardword *et al.*. (1999) and Holzmann and Jorgersen, 2001.

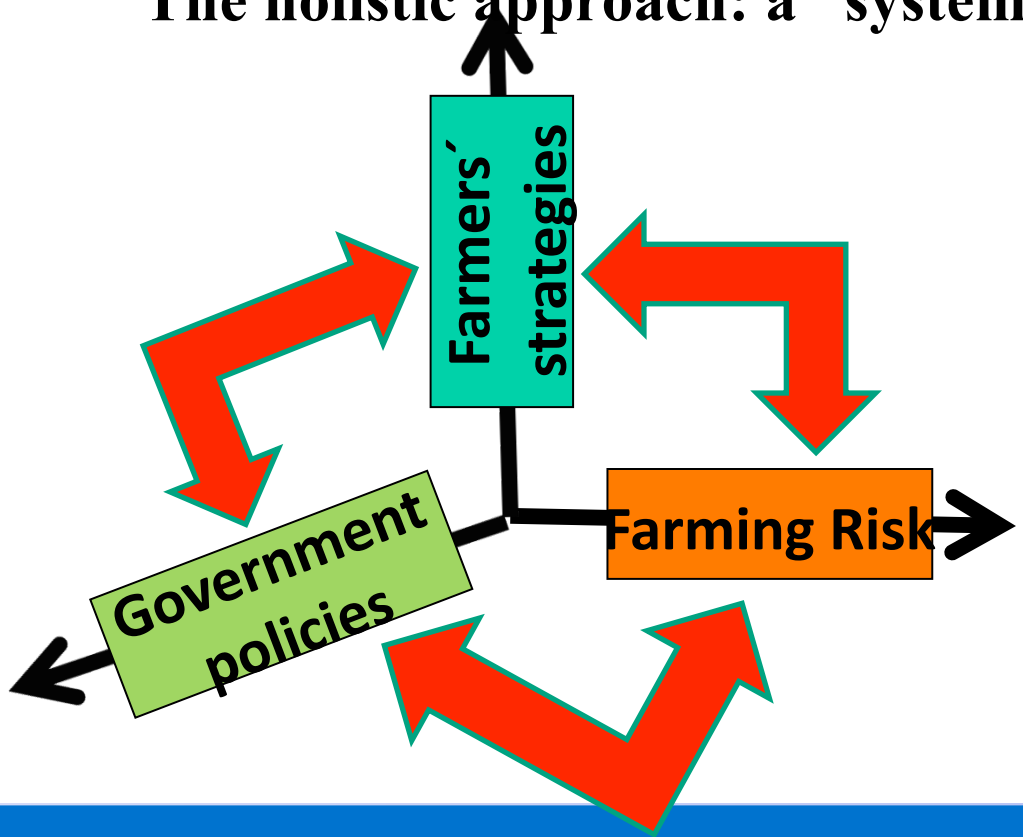
There is a range of Risk Management Strategies…

	Farm / household / community	Market	Government
Risk Reduction	Technological choice	Training on risk management	Macro policies Disaster prevention (flood control…) Prevention of diseases
Risk Mitigation	Diversification in production Crop sharing	Futures / options Insurance Vertical Integration Production/market contract Spread sales Diversified finance Off-farm work	Tax system income smoothing Counter-cyclical Programme Border and other measures in the case of contagious disease outbreak
Risk Coping	Borrowing from neighbours / family Intra-community charity	Selling financial assets Saving / borrowing Off-farm income	Disaster relief Social assistance All agricultural support programs

From a linear to a holistic approach

The linear approach

The holistic approach: a "system" with three axes



A holistic approach means the focus is on:

- the whole farm / farm household income
- all sources of risk and CORRELATIONS
- the whole set of policies and strategies

Role for the Government: positive approach

	Market creation	Modifying market incentives	Risk reduction and mitigation (income smoothing)	Coping with risk (consumption smoothing)
Ex Ante	• Stable macro and business environment • Training and information to farmers • Produce and sharing of information on risks • Increase competition in the insurance market • Institutions for futures and options markets • Defining responsibility in risk management • Private / public partnerships	• Subsidies to Insurance, reinsurance futures • Participation in mutual funds • Incentives on saving accounts • Facilitate access to credit • Output market interventions / Regulations (price stabilization)	• Disaster prevention (flood control…) • Prevention of animal diseases (domestic and border measures) • Legal form of farms R & D of new varieties or breeds	•All agricultural support programs
Ex post - *triggered ex post*			• Countercyclical programs • Tax system for income smoothing	• Social assistance
- decided ex post			• Border and other measures in case of contagious disease outbreak • Ad hoc payments for quick economic recovery	• Disaster relief (payments, subsidised credit…) • Other Ad hoc ex post payments

EFFICIENCY

EQUITY

Some Policy Guidelines (1)

- **Empower farmers to take individual responsibility** for risk management as part of business management.
- **Facilitate farmers to take advantage of correlations** between risks, asset returns and sources of income.
- **Improve the availability of a variety of instruments,** particularly market instruments: Sound business environment with competitive markets.
- **Facilitate the flow of information** on risk and creation of knowledge base and human capital on risk management
- If there are many interacting risk management tools available: **think twice before creating new policies**
- **Avoid "Policy risk"**

Policy Dilemmas (1): Crowding out

Crowding-out and crowding-in

- If Government assures against a given risk it can crowd out market or on-farm strategies
  - Market Price support may have crowded out futures markets in Europe
  - Structural adjustment
- There is potential for *crowding-in*:
  - Information and symmetry
  - For instruments tackling "complementary" risks

Policy Dilemmas (2): Disaster relief

Ex ante vs *ex post* assistance, particularly for catastrophic risk.

- Political economy: ex ante programs to deter emergency relief (Innes, 2003).
- Empirical evidence is not clear:
  - Subsidized insurance in the US (since 1980) has not replaced disaster assistance (Glauber, 2004)
  - EU countries with less insurance spend more in disaster payments (Garrido and Bielza, 2008)

Policy Dilemmas (3): Conflicting objectives on risk

Conflicting objectives: Risk reduction and welfare improving

- Welfare improving: transfer efficiency
- Risk reduction: "risk" efficient

Policy Dilemmas (4):
Conflicting objectives on production effects

Conflicting objectives: Minimising production and trade distortions

- All programmes linked to "current variables" - like prices or revenues- have a an effect on production through insurance effects

Ongoing OECD Project on Risk Management

Application of the holistic Approach:

1. Policy and Institutions: Thematic review on Risk Management in Agriculture:
   - Spain, New Zealand, Australia, Canada and The Netherlands
2. Micro modelling: Farm level analysis on risk exposure and risk strategies
   - Germany, Estonia, The Netherlands, Italy, United Kingdom, Australia, New Zealand , Canada (and Spain, US, China?)

International Conference:

- Paris, November 2010

Thank You

Trade and Agriculture Directorate

Visit our websites:

www.oecd.org/agriculture/policies/risk

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