

# Agricultural Policies and Risk Management

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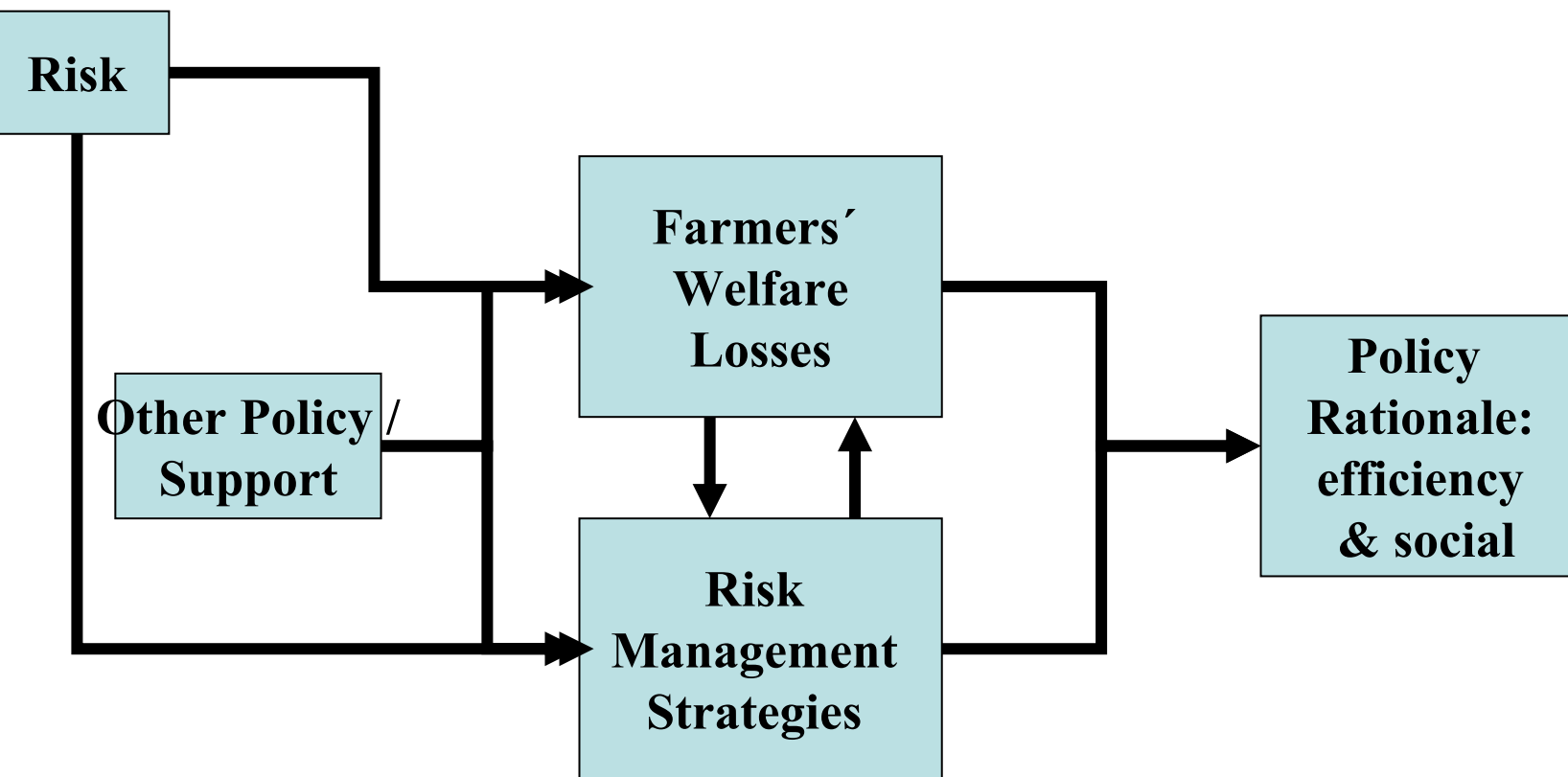
# Objectives & Main sources

- Defining the context in which any policy intervention, particularly on Agricultural Insurance, takes place
    - All agricultural policy interventions
    - International constraints (WTO)
  - Underlying the need of coherence among policies and market strategies
- OECD (2006): “OECD Agricultural Policies 2006: at a Glance”
  - OECD (2005): “OECD Papers: Special Issue on Decoupling Agricultural Support”
  - OECD (2003): “Analysis of the 2002 Farm Act in the United States”
  - OECD (2000): “Income Risk Management in Agriculture”
  - WTO: Member countries’ Notifications

# Outline

- 1. Farm Household Income Risk Management and rationale for policy action**
- 2. The context of Agricultural Support in OECD countries: PSEs**
- 3. Does PSE support affect farming risk? And, hence, production?**
- 4. The International context: WTO boxes and notifications**
- 5. Some guiding conclusions**

# 1. Farm Income Risk Management and the Rationale for policy action



# Risk in Agriculture

- Risks in Agriculture: Production, Market, Financial, Environmental, Institutional, Regulatory, Health, Property, Policy...  
→ Income
- Each type of risk with its own characteristics: Frequency and distribution of occurrences, Magnitude of losses, Randomness, correlation.

# Risk management strategies

Managing finances/ Diversification of income sources

Production techniques

Marketing techniques: spreading sales, storage, contracting

Vertical Co-ordination

- Response to consumers' segmented demands and risk reduction
- ...but lower prices, market power and unavailability

Futures Markets

- Varying and growing use plus innovative contracts
- ...but demand under support, unavailability, need of training, cost

Insurance systems

- Few entirely private, varying levels of intervention, no need of ad hoc measures and foreseeable budgetary cost
- ...but transactions costs & it may creates support, moral hazard, rent seeking

Safety nets

- Through social security, taxations systems, agr programs (Canada)

# Rationale for policy action

## **Are there full costless contingency markets?**

- Information failure: Adverse Selection and Moral Hazard
- Systemic vs idiosyncratic risk
- High transaction costs

➔ Risk averse farmers may produce below optimum

➔ There may be welfare (efficiency) losses for society

## **Improving efficiency in risk management in agriculture and in the economy:**

- Is risk in agriculture higher than in other sectors?
- Is contingency market failure deeper than in other sectors?
- Is Government intervention cost effective?

## **Instruments from Social policy**

- Help poor farmers to adjust after shocks, but the criterion should be “poor” not “farmer” and refer to whole farm household income



## **2. The context of domestic support to agriculture in OECD countries**



# How does government intervene on farmers' income risk ?

- economic environment:
  - stable macro parameters: exchange rate, inflation
  - well functioning markets for inputs and outputs (credit)
- regulations
  - food safety, environment,
  - land, labour
- social and fiscal policies
  - income safety net,
  - income smoothing tax systems
- agricultural policies
  - Level and composition of support in OECD countries (Total and Producer Support Estimate, TSE/PSE)
  - Types of instruments and mechanisms through which they affect risk

# Agricultural support in OECD

## Support to producers (PSE)

- Market price support (MPS):  $Q_s * (P_s - P_w)$
- Budgetary payments (BPP) based on implementation criteria
  - Payments based on output
  - Payments based on area planted/animal numbers
  - Payments based on historical entitlements
  - Payments based on input use
  - Payments based on input constraints
  - payments based on overall farming income

## General services to the sector (GSSE)

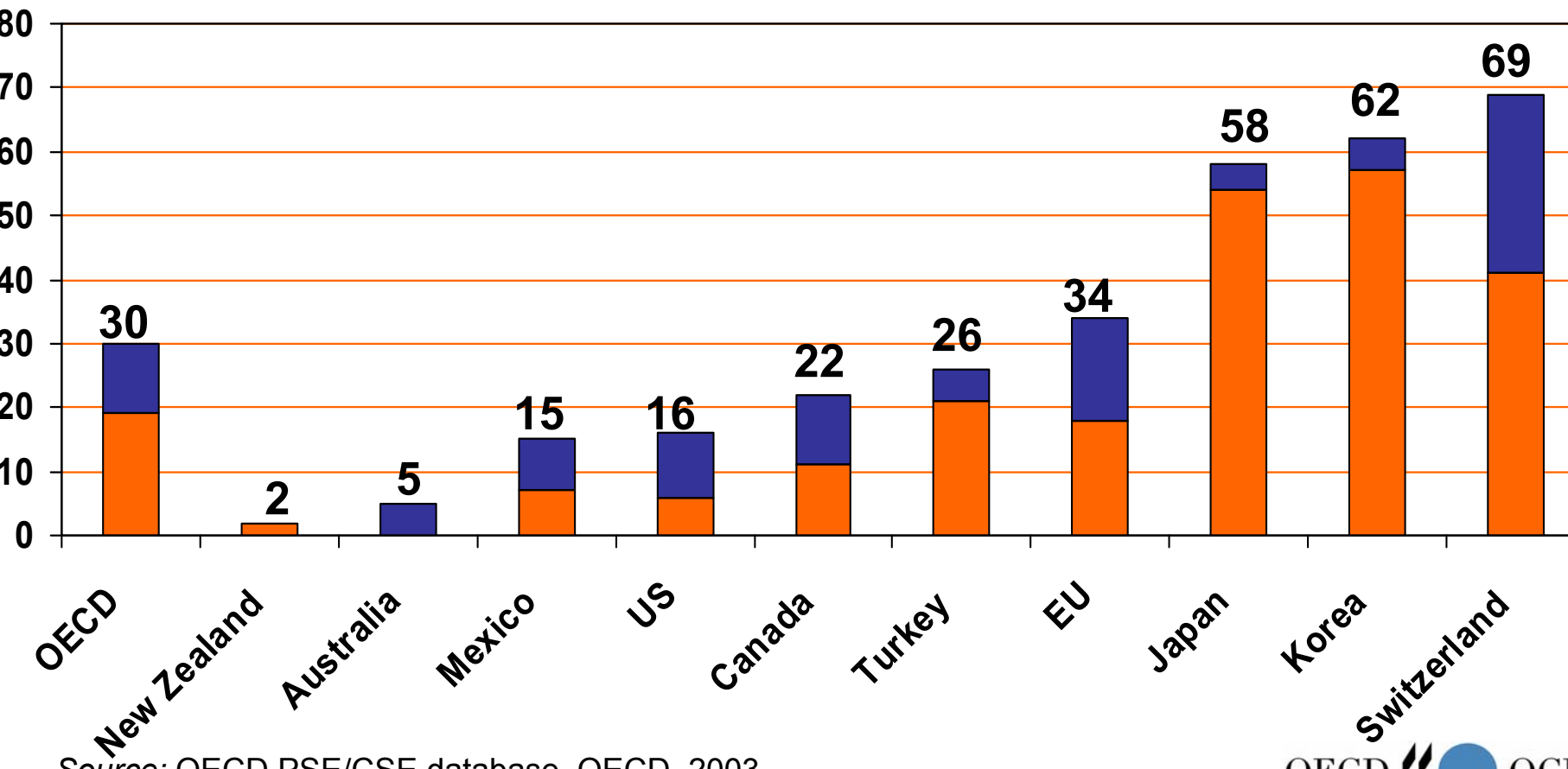
- R&D, schools, inspection, infrastructure, marketing/promotion, public stockholding

## Total support (TSE) =

– PSE + GSSE + Consumer subsidies

# %PSE in selected OECD countries 2003-05

Output support Other



# Main subsidized risk reducing programs in OECD (divers PSE categories)

- Disaster payments: Most countries
- Crop insurance in (Box 4 in OECD, 2000):
  - Canada, Mexico, Spain and the US
- Revenue insurance in (Box 5 in OECD, 2000):
  - Canada (some provinces) and the US
- Payments based on revenue losses in:
  - Canada (CFIP) and
  - US (market loss assistance / counter-cyclical payments)
- Safety nets (Box 7 in OECD, 2000):
  - systems based on savings (NISA in Canada)
  - welfare, transitional assistance (Australia, Ireland, Korea)
  - Income smoothing taxation systems (Australia, Sweden)

# 3. How agricultural support affects risk? And Production?

- Impacts of PSE policies on variability of receipts
- Reference:
  - Risk effects of PSE crop measures (OECD, 2004)
  - Box 2.2 and Annex 4 in “Agricultural Policies in OECD countries: Monitoring and Evaluation” (OECD, 2003)

# All policy instruments affect risk

- They all do (including through policy risk):
  - “decoupled” income support affects income (wealth effect)
  - regulations, input subsidies and general services affect yield variability and receipts
  - coupled support affects farm receipts and sometimes input use
- Some measures in all categories have stabilizing mechanisms
  - (intervention price, deficiency payments, stabilization payments based on area, crop and revenue insurance, historical entitlements or overall income)

# % increase in variability of receipts due to support

country average across commodities, 1986-2001

Country	Market Price Support	Payments on Output	Payments on Area planted / Animal numbers	Payments on Historical Entitlements.	Payments on Input use	Other Payments	All PSI support
Australia	-50	..	..	..	..	..	-10
Canada	-49	..	..	..	..	..	-33
European Union	-57	-13	-13	..	..	..	-56
Japan	-59	-19	..	..	..	-13	-48
Korea	-26	..	..	..	..	..	-31
Mexico	-43	..	..	..	..	..	-45
New Zealand	-78	..	..	..	..	..	-26
Norway	-61	-47	-38	..	-56	..	-48
Switzerland	-39	..	..	-13	-11	..	-48
Turkey	-38	..	..	..	..	..	-29
United States	-60	-49	-24	-18	..	..	-40
<b>Average</b>	<b>-51</b>	<b>-32</b>	<b>-25</b>	<b>-16</b>	<b>-33</b>	<b>-13</b>	<b>-38</b>

<sup>1</sup> Only statistically significant results are reported

# Impact of support measures on the variability of receipts

- Most categories of support reduce revenue variability, some to a large extent
- MPS always does (size + mechanisms)
- Variability reduction is not proportional to support size
- Some measures that are meant to compensate for income losses increase variability (upwards)



# ... and impact production of risk averse farmers...

## Example: coarse grains in US

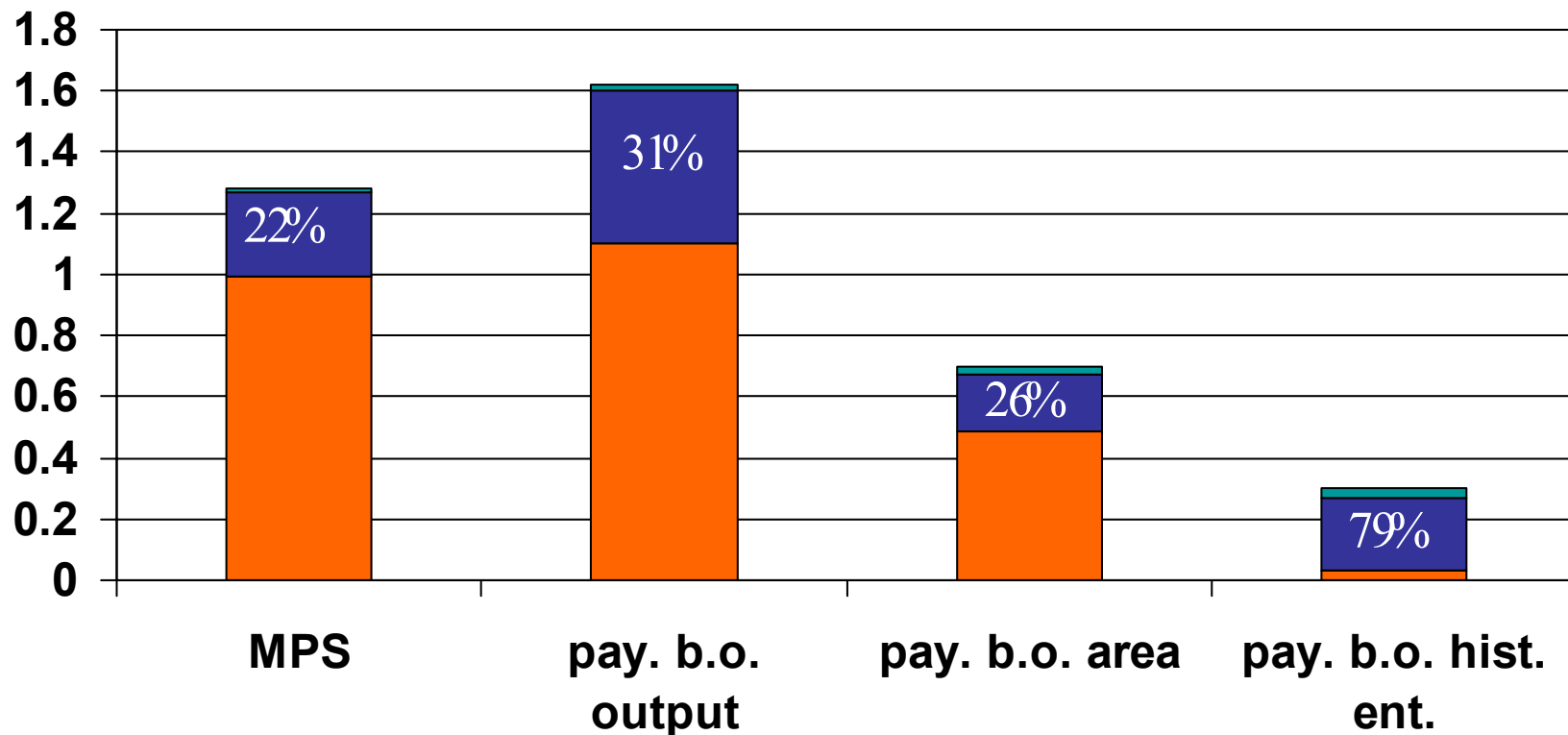
Production ratio:

1.29

1.62 <sup>2001</sup>

0.70

0.30



Source: OECD, 2004.

price effect Insurance effect Wealth effect

# Interaction among policy measures

- In general, risk reducing payments crowd-out the use of market strategies, particularly if they cover against the same source of risk
- There can be perverse effects: risk reducing support that ends up increasing farmer's income variability
- There is a strong need to co-ordinate all risk reducing measures

# Results on Production Impacts

- Price effect dominates for most categories
- but risk related effect can be large
- and wealth effect are small in most cases
- For specific policy changes with counter-cyclical design like 2002 US Act, risk (insurance) effects can be the main effect
- Insurance subsidies (Spain): small, but statistically significant impacts on production



# **4. The international context: WTO boxes and notifications**

# Pillar 3: Domestic Support 3+1 boxes

- **Amber box:** measures that distort trade
- *De minimis:* Commodity and non commodity specific support under 5% of the total value of production
- **Blue box:** direct payments under production limiting programs
- **Green box:** measures that do not, or only to a minimum extent, distort trade
  - **1. Basic criteria:** “...no, or at most minimal, trade-distorting effects or effects on productions”
    - » publicly funded support with no transfer from consumers
    - » support that does not provide price support to producers

# Green Box specific criteria

## . Decoupled **income support**

- Eligibility based in clear criteria such as factor use or production level in a defined and fixed based period.
- The amount of the payments will never be based on information on any year after the based period about: type or volume of production, prices or factor use.
- No production shall be required in order to receive the payment..

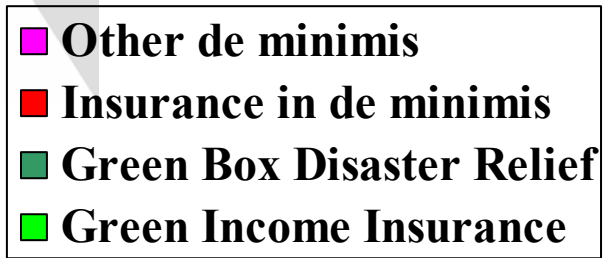
## . Government participation in **income insurance and income safety net programs**.

- Eligibility determined by a gross agricultural income loss exceeding 30% of recent past average.
- The amount of the payment will compensate for less than 70% of the loss.
- The amount of the payments relates solely to income, and not to production or price
- These payments plus relief from natural disasters cannot exceed producer's losses

## . Payments for relief from **natural disasters (including participation in crop insurance schemes)**.

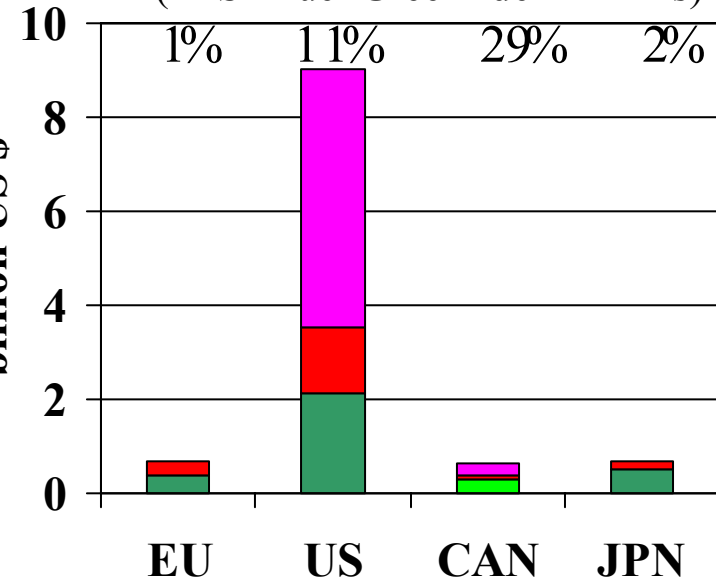
- Eligibility, after a government formal recognition of a natural disaster, determined by a production loss exceeding 30% of recent past average.
- Payments applied only in respect to the losses, and with a maximum compensation equal to the cost of replacing.
- These payments plus income insurance cannot exceed producer losses.

# Insurance subsidies and counter-cyclical payments: OECD countries



% in total support

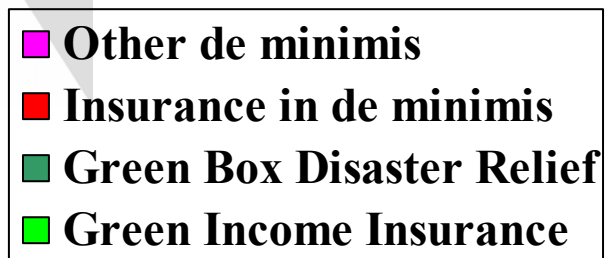
(AMS+Blue+Green+de minimis)



	EU 2001/02	US 2001	CAN* 2001	JPN 2000
Green Income Insurance	2%	0%	22%	0%
Green Box Disaster Relief	58%	18%	0%	73%
Insurance in de minimis	40%	23%	41%	27%
Other in de minimis	0%	59%	37%	0%
	100%	100%	100%	100%

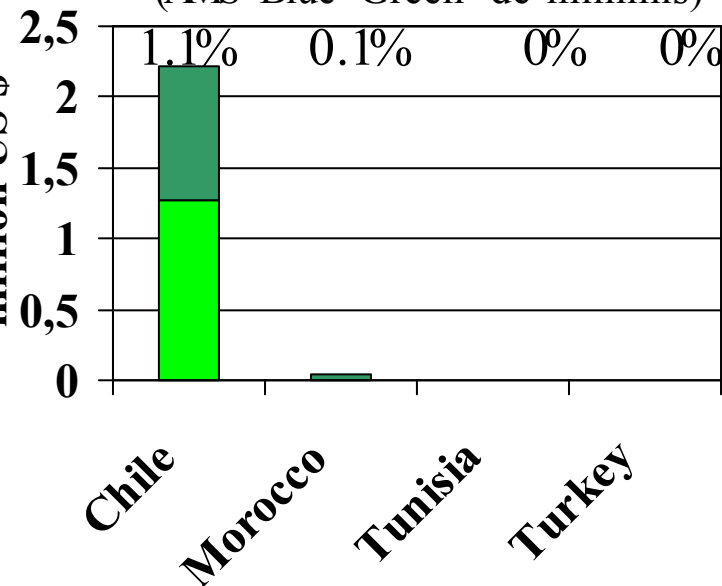
\* In 2001 is >5% VP and not in Non Commodity Specific de minimis

# Other countries' Insurance and counter-cyclical payments (last notification)



% in total support

(AMS+Blue+Green+de minimis)



Chile 2002 Morocco 2001 Tunisia 2001 Turkey 2001

	Chile 2002	Morocco 2001	Tunisia 2001	Turkey 2001
Green Income Insurance	57%	0%	0	0
Green Box Disaster Relief	43%	100%	0	0
Insurance in de minimis	0%	0%	0	0
Other in de minimis	0%	0%	0	0



# Income insurance and safety nets

## OECD

- **Australia:** Farm management deposit scheme (no payment made)
- **Canada:** Alberta Farm Income Disaster Program and Prince Edward Island Agricultural **Disaster Insurance** Program

## NON-OECD

- **Argentina:** support for compulsory hail, work accident and **life insurance** (special tobacco fund) + creation of a solidarity fund for **hail insurance** coverage (since 1997)
- **Costa Rica:** Insurance services, including **crop insurance**
- **India:** **Crop insurance** scheme Farm management deposit scheme (no payment made)
- **Sri Lanka:** **Income insurance**, income safety net programme

# Relief from natural disasters & Crop insurance (1)

OECD

- **Australia:** Rural Adjustment Scheme; Tropical fruit producer assistance (1996); Exceptional Circumstances Relief Payment; contribution to regional Disaster fund, interest subsidies (State funding), etc.
- **EC:** compensatory payments in respect of weather, restoration of agricultural potential and natural disasters (re-plantation of olive grove in 96)
- **Hungary:** migration of damage caused by drought
- **Japan:** govern. Subsidy on **agricultural insurance** premium; natural disaster relief loans
- **Korea:** compensatory payments for losses caused by natural disaster
- **New Zealand:** administrative cost of providing advisory services to farmers affected by drought and paying army personnel for the distribution of water to farm households
- **Norway:** compensation for crop damage due to natural disaster
- **Poland:** protection against and relief from flood and restoration of agricultural production
- **Slovak republic:** partial damage reimbursement
- **Slovenia:** Compensation for production losses caused by disaster.
- **US:** Non-insured Crop Disaster Assistance Program (NAP); compensation for feed or forage losses, for loss of tree seedlings, for livestock losses; emergency

# Relief from natural disasters & Crop insurance (2)

## NON-OECD

**Argentina:** Personal loans for development and refinancing loans

**Botswana:** Disaster /emergency aid

**Brazil:** **Agricultural insurance** program

**Chile:** **Agricultural Insurance** and Agricultural Emergency Fund

**Colombia:** Disaster Relief

**Cuba:** State **Agricultural Insurance** programme

**Cyprus:** Contribution to **Agricultural Insurance** Organization

**India:** Scarcity Relief and Natural calamities

**Indonesia:** Payments to help when Natural calamities

**Israel:** contribution to a Natural **Disaster Insurance** Programme; advance payment and payments for farmers not covered by insurance, administration cost subsidy

**Morocco:** aid to deprived regions or regions hit by disaster

**Namibia:** Drought aid

**Philippines:** **Crop insurance** and calamity fund

**South Africa:** Subsidies for disaster aid

# Risk reducing in *De minimis*

## WTO Notifications

### OECD

- EU (2002):
  - **Insurance subsidies**
- United States (2001):
  - **Crop and revenue Insurance** subsidized by the Federal Crop Insurance Corporation
  - Multiyear crop disaster payment
  - Crop Market Loss Assistance payments
- Canada:
  - Net Income Stabilisation Account (NISA)
  - **Crop Insurance**
- Japan (2000):
  - **Agricultural Insurance scheme**

### NON-OECD

# Proposals in current negotiations

- Crop insurance may not require formal recognition by Government authorities of a natural disaster (Harbinson Report 2003, and draft possible modalities June 2006)



# 5. Guiding Conclusions

- Strategies to reduce income risk depend on the characteristics of risk and require a set of tools and instruments
- The role for the government in risk management is:
  - to provide a sound business environment with competitive markets and clear regulations
  - to facilitate the development of market mechanisms
  - when market fail, to provide instruments (in general for high levels of risk) according to reform principles

# Conclusions (cont.)

- Reform principles: intervention should be
  - effective and cost-efficient,
  - minimally distorting,
  - delivered in a transparent, decoupled and targeted way,
  - without
    - undermining the development of private/market solutions,
    - or hindering the adjustment capacity of the sector, and
    - encouraging rent seeking (need to limit moral hazard and adverse selection)
- Hence the need to have an integrated approach
  - Interaction between interventions are crucial.

# Conclusions (cont.)

This seems not to be the case in most OECD countries

- policies have contradictory objectives
- most support is linked to production
- mixed experience from insurance and safety-nets in North America
  - Canada safety nets vs US moves to more traditional subsidies
- ad hoc intervention gives farmers contradictory incentives

Need for more information on the mechanisms available, their utilization and performance and their economic impact (assessment)

Importance of training and information

Strong integration between private and public initiative

Sharing of experiences





**Thank you!**