



How to manage food price instability?

Synthesis of the results

Franck Galtier (CIRAD) et Bruno Vindel (AFD)





ECART

Christian Hoste : christian.hoste@ecart-eeig.org

Nelida Alé : nelida.ale@ecart-eeig.org

Marie-Claire Hilaire : marie-claire.hilaire@cirad.fr

*A European
team*



CIRAD

Franck Galtier : galtier@cirad.fr

Nicolas Bricas: nicolas.bricas@cirad.fr

Benoît Daviron: benoit.daviron@cirad.fr

Françoise Gerard: francoise.gerard@cirad.fr

Tancrede Voituriez : tancrede.voituriez@iddri.org



IRAM

Jean-Francois Sempere: jf.sempere@iram-fr.org

Roger Blein: roger.blein@bureau-issala.com

Jérôme Coste: j.coste@iram-fr.org

Johny Egg: egg@supagro.inra.fr

Denis Michiels: michiels@no-log.org



NRI

Gideon Onumah : geonumah@yahoo.co.uk

Ruth Butterworth: r.r.butterworth@gre.ac.uk

Jonathan Coulter: jcoulter01@yahoo.com



WUR

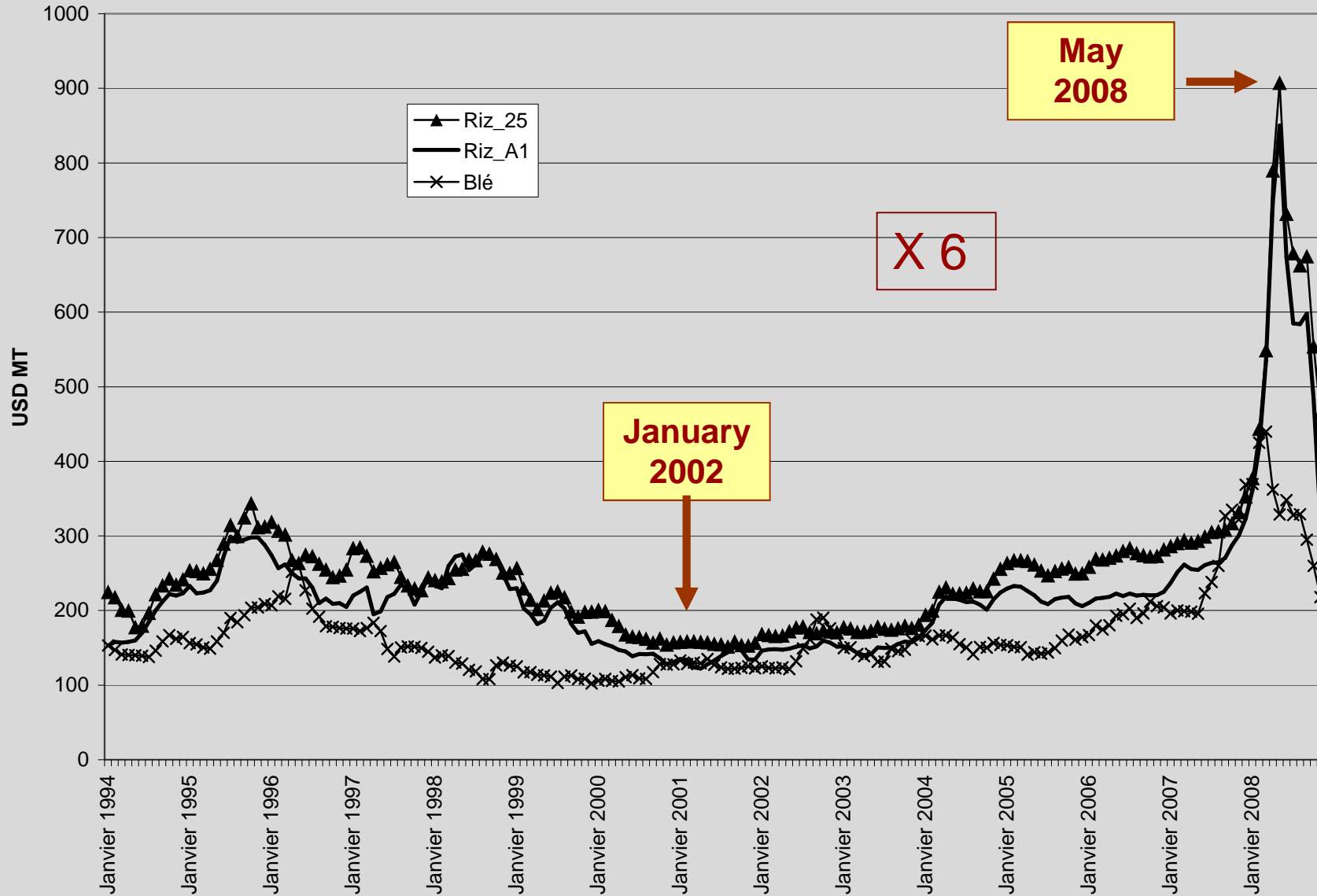
Gerdien Meijerink: Gerdien.Meijerink@wur.nl

Marcel van Asseldonk: Marcel.vanAsseldonk@wur.nl

Kees Burger: kees.burger@wur.nl

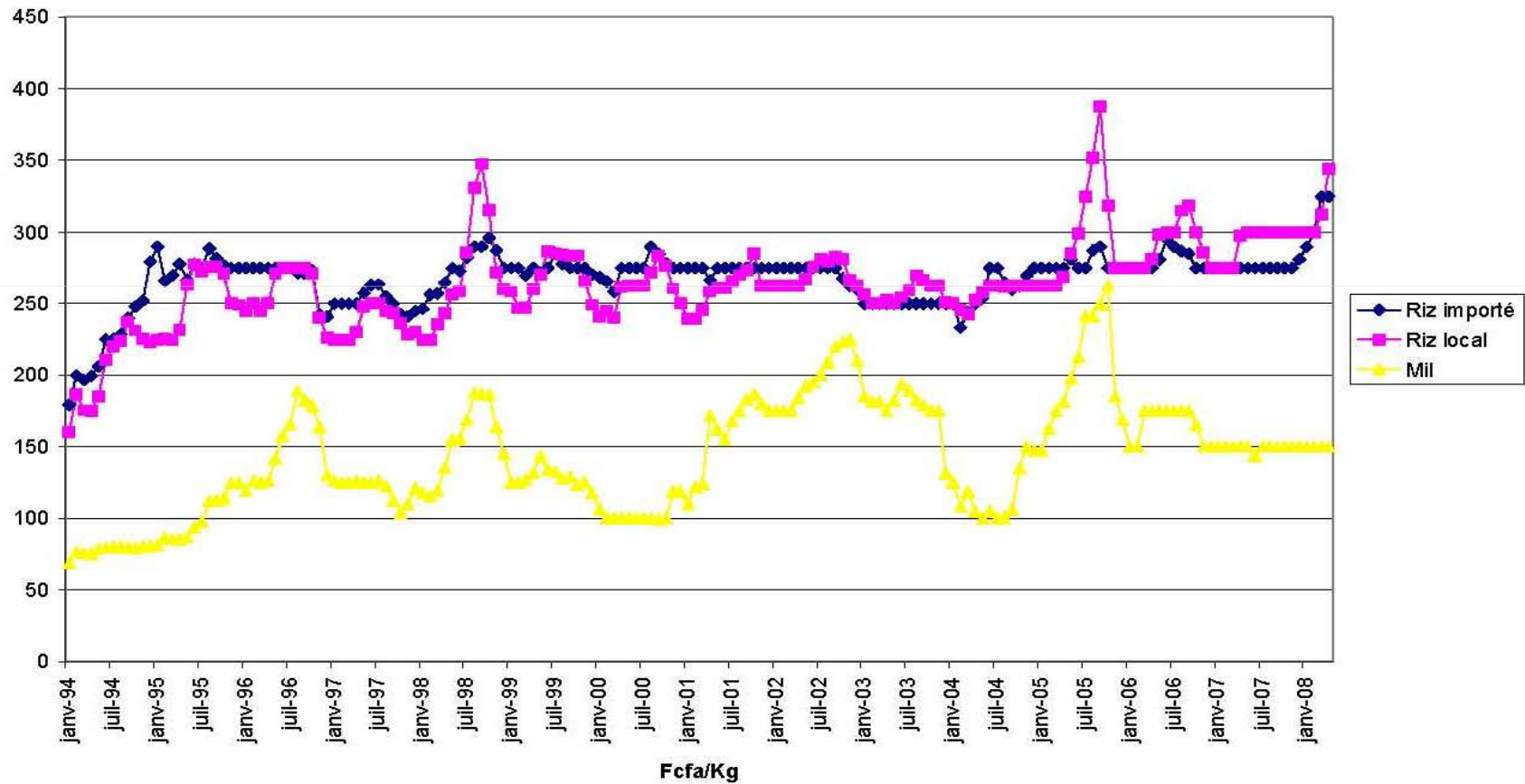
The problem

New context: strong instability of international food prices



Food price instability is also a local problem:

Evolution of the price of millet in Bamako compared to rice (1994-2008)



Stakes

- ❑ Instability of food prices can :
 - affect the food security of poor households
 - impede the modernisation of agricultures (green revolutions)
 - reduce the scope of globalization (export bans, purchase of lands, self-consumption...)

- ❑ Vicious cycle: under-productive farms and narrow markets can increase price instability

What are the potential solutions?

The quest for a miracle instrument

- The quest for a « New International Economic Order » through commodity agreements from the 1930s' to the 1970s'.
- The quest for a liberal solution through risk management tools (futures, options etc.) since the 1980s'.

Toward to a comprehensive approach: the 4 categories of tools

Goal	Stabilise Price	Reduce the effects of price instability
Governance		
Market-based	A-instruments	B-instruments
Public	C-instruments	D-instruments

A-instruments

- ❑ **Objective:** to stabilise prices by improving the performance of farms and markets
- ❑ **Rationale:**
 - modernising farms allows production to be less sensitive to natural hazards (irrigation systems, pest management...) and to be more responsive to price incentives
 - modernising markets allows deficits and surpluses to be offset between zones (by means of trade) and between years (by means of storage).
- ❑ **Examples:**
 - Irrigation systems
 - storage infrastructures
 - quality standards
 - warehouse receipt systems
 - exchanges

B-instruments

- ❑ **Objective:** to manage risks by market-based tools
- ❑ **Rationale:** enabling economic actors to cover themselves against the risks linked to variability of prices and harvests
- ❑ **Examples:**
 - forward contracts
 - futures contracts
 - call or put options
 - crop insurances
 - weather index insurances
 - ...

C-instruments

- ❑ **Objective:** to stabilise prices by public interventions on the market
- ❑ **Rationale:** influencing supply or demand allows to orient the price
- ❑ **Examples:**
 - Interventions on production
 - Regulation of imports and exports (variable taxes and subsidies, quotas, bans)
 - Public stocks

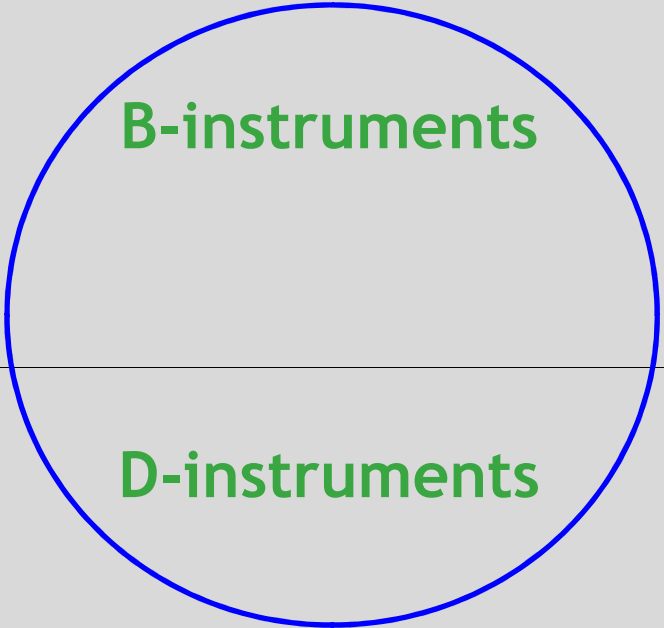
D-instruments

- ❑ **Objective:** to support vulnerable household incomes during periods of crisis
- ❑ **Rationale:** transferring a good (*money, vouchers, food or even inputs*) to targeted poor households during periods
- ❑ **Examples:**
 - Food aid
 - Food for work
 - Cash for work
 - Subsidies on consumption
 - Vouchers for inputs
 - ...

The « optimum strategy »

The « optimum strategy »

Objective Governance	Price stabilisation	Price risk management
Market-based	A-instruments	B-instruments
Public	C-instruments	D-instruments



The rationale for the optimum strategy

❑ Failure of stabilization policies

- End of international commodity agreement (Gilbert 1996)

❑ Theoretical arguments against price stabilization

- Newbery and Stiglitz (1981)
- Natural assurance of producers
- Informational role of prices

The failure of the optimum strategy

- ❑ **The optimum strategy confronted by the facts**
 - **The expected development of B-instruments has not occurred**
 - **D-instruments did not succeed in preventing the reduction in capital and weakening of highly vulnerable households**

The alternative paradigm:

***stabilise prices to modernise
agriculture***

Taking into account the different causes of price instability



Natural instability: price fluctuations are linked to variations in domestic supply resulting from natural hazards affecting production (rains, locusts etc.).

Imported instability: price fluctuations are linked to variations in international prices, exchange rates or transport costs.

Endogenous instability: price fluctuations are linked to the functioning of the market itself (wrong expectations, cobweb phenomena, speculative bubbles, panic movements etc.).

The weakness of the arguments against price stabilisation

□ The informational role of prices

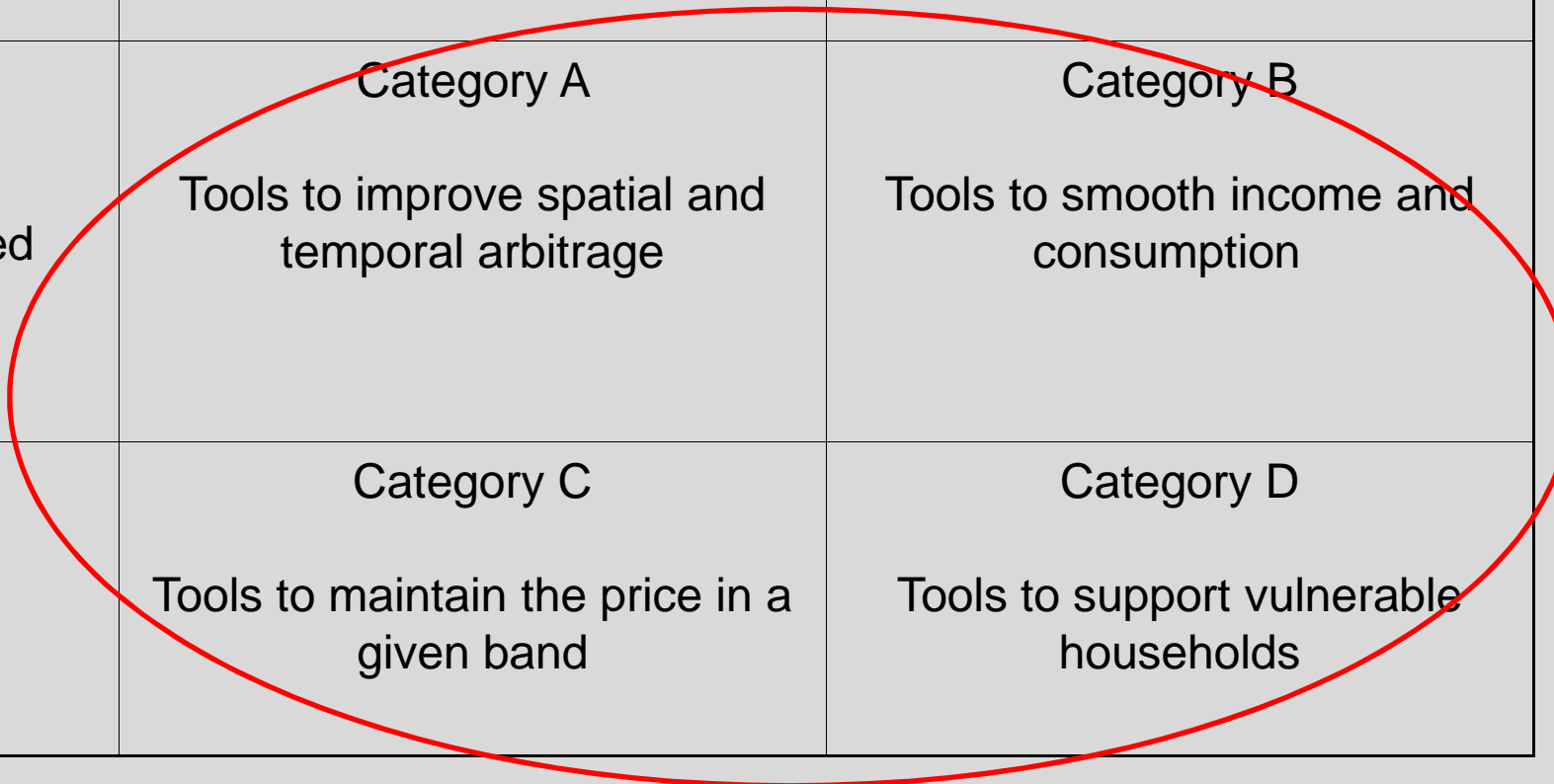
- endogenous instability (cf. Ifpri proposal)
- imperfect expectations

□ The “natural” insurance for producers

- only plays in the case of natural instability
- only plays for some producers (in a situation of excedent; with a production level highly correlated with the aggregated production)
- plays negatively for producers in a situation of deficit

The « new paradigm »

Objective Governance	Price stabilisation	Reduction of the effects of price instability
Market-based	Category A Tools to improve spatial and temporal arbitrage	Category B Tools to smooth income and consumption
Public	Category C Tools to maintain the price in a given band	Category D Tools to support vulnerable households



**Choosing instruments according to the
causes of price instability**

Which policy in the case of natural instability?

❑ Modernising production structures

- **Objective:** to reduce the sensitivity of production to natural hazards and to increase the price elasticity of production
- **Means:** R&D, extension services, subsidies, credit, targeted vouchers
- **Limits:** lack of technologies for some products (millet, sorghum...), access to credit, price instability (vicious cycle)

❑ Modernising markets

- **Objective:** to improve arbitrages over time (private storage) and in space (domestic and regional trade)
- **Means:** promoting the emergence of efficient infrastructures (transport, storage, communication...) and institutions (Grades and standards, Market information systems (MIS), Warehouse receipts systems (WRS), Exchanges...)
- **Limits:** problems of circularity, government intervention, price instability

❑ Regulating imports and/or exports

- **Objective:** to regulate import and/or export flows to maintain constant the quantity of food available in the country
- **Means:** variable taxes/subsidies, quotas, prohibitions on imports and/or exports
- **Limits:** not possible for non tradables, not relevant for “big countries”, prohibited by WTO (except Special Safeguard Clause), may be expensive (especially for landlocked countries), not possible if borders are porous, crowding out effect on private storage.

❑ Using a buffer stock

- **Objective:** to cover deficits and absorb surpluses
- **Means:** regional, national, or local public stocks
- **Limits:** cost, (public stocks must be large enough to be able to cope with a succession of poor harvests or to absorb a succession of surplus harvests), problems of governance, crowding out effect on private storage.

Which policy in the case of imported instability?

❑ Stabilising parity prices

- **Means:** variable taxes/subsidies or variable quantitative restrictions (quotas, prohibitions) on imports and/or exports
- **Limits:**
 - Not relevant for “big countries”
 - Partially prohibited by WTO
 - May be expensive (especially for landlocked countries)
 - Not possible if borders are porous (re-exports).
 - Crowding out effect on private storage

❑ Promoting food self-sufficiency

- **Means:** customs duties, subsidies on inputs
- **Limits:**
 - Strategy suited only to countries close to achieving food self-sufficiency
 - Customs duties are capped by the WTO
 - At the collective level, protectionism implies: narrower markets (and more unstable prices) and a less efficient resource allocation (with higher costs and higher prices)

❑ Developing international actions to stabilise international food prices and exchange rates

- **Means:** public stocks (*Cf. Ifpri and World Bank proposals*), support of the monetary stability of countries (*example: the CFA franc zone*), regulation of futures markets to avoid excessive speculation
- **Limits:** problems of collection action

Which policy in the case of endogenous instability?

□ Stabilising expectations

- **to handle or improve the predictability of natural instability and imported instability** (for example by publishing harvest forecasts)
- **to improve the predictability of the public stabilisation policy** (transparency and credibility)
- **to regulate futures markets** (by capping the positions of non-commercial operators, by introducing taxes on future market transactions)

□ Reducing the effects of the instability of expectations

- **To implement ad hoc measures to break the speculative dynamics**
 - to remove import taxes (or even to subsidise them) and to tax or limit exports to curb the price increase
 - to contain the price spiral by using a buffer stock

Conclusion

Changing of paradigm: from risk management to structural transformation

- ❑ From the quest for a miracle instrument *to the combination of different tools*
- ❑ From risk management *to the necessity of price stabilisation*
- ❑ From exclusion *to inclusion of public instruments*
- ❑ From “one instrument fits all” *to policies suited to each cause of price instability*
- ❑ The necessity of transparency (rules, intervention prices...).

Thank you!

For more information, see:

a Policy Brief

CIRAD
No 2
November 2009

Food security

Food price instability in developing countries

The need for public intervention to stabilise prices

Franck Galtier

The food crises which affected the Sahel in 2005 and the international markets in 2008 have placed the issue of food price instability at the very forefront of discussion. The urban riots which broke out in about forty developing countries as a result of the sharp price increases of 2008 emphasised the fact that this instability can have serious consequences for food security both in the short term – consumer access to food – and in the long term – incentive to producers to invest and increase production. Numerous experts predict that this instability will be long-lasting, both on the international markets and in developing countries. What, then, should be done?

The quest for a miracle instrument

Since the inter-war years, the search for a solution had centred on price stabilisation through the public authorities, in particular by creating stocks. During the 1980s, economic liberalisation led to the emphasis being placed on risk management through private instruments (futures markets, options), complemented by safety nets intended for vulnerable households. These approaches did not achieve the desired results.

A comprehensive examination of all the potential instruments for handling food price instability was necessary, resulting in four categories being identified according to the objective – to stabilise prices or manage price risk – and the method of governance – market-based or public.

The four categories of price instability management instruments

Governance	Objective	Stabilise prices	Manage price risk
Market-based		"A-instruments"	"B-instruments"
Public		"C-instruments"	"D-instruments"

perspective
In this publication from the Cirad, the researchers open new lines of thought and action based on their research.

a Working Paper

Unité Mixte de Recherche
MOISA
Marchés Organisations
Institutions Stratégies d'Acteurs

How to manage food price instability in developing countries?

GALTIER, F.

CIRAD
INRA
Montpellier
SupAgro
IRD
Unité de recherche pour le développement

Working Paper Moisa N° 5/2009

www.cirad.fr (French)

www.cirad.fr/en (English)

Contact: galtier@cirad.fr