

Water and Food
for ending poverty and hunger
a theme for the 5th World Water Forum

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Theme 2 : Advancing Human Development and the Millennium development Goal

UN Water *Theme Coordinator*

2.3 Water and Food for ending poverty and hunger

ICID *Topic Coordinator*



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2.3 Water and Food for ending poverty and hunger

Session 1 Key question

How to achieve the **required food production** to meet the growing demand ?



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Session 2 Key question

How can **food market measures** boost rural development and poverty alleviation?



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Session 3 Key question

Water for **bioenergy or food**?



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Session 4 Synthesis

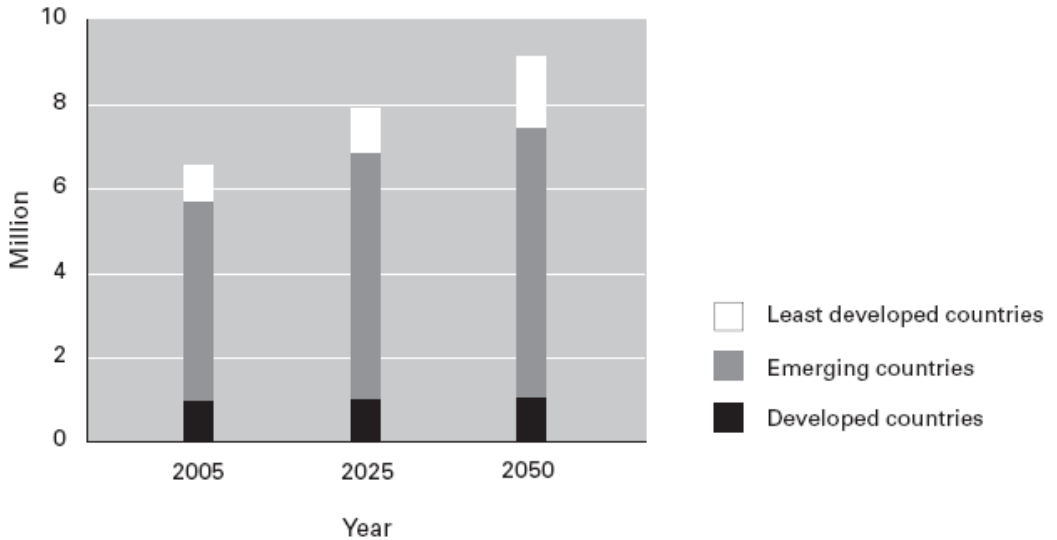
How can better water management reduce **poverty and hunger** ? A synthesis



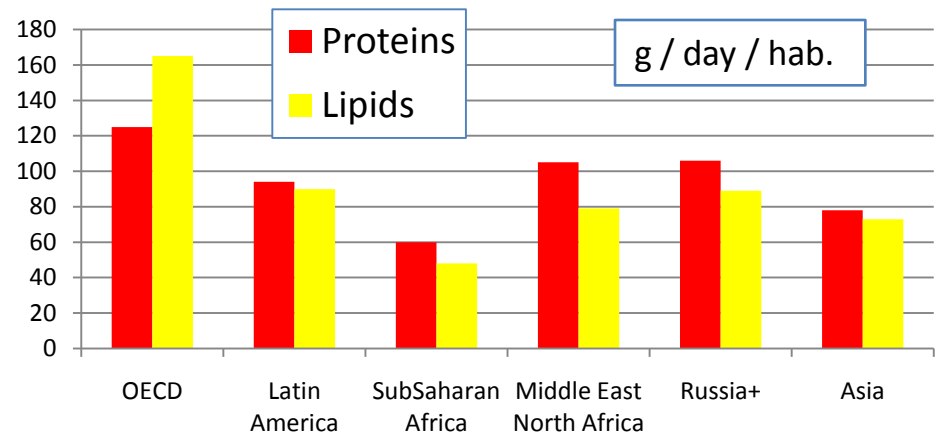
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Food demand increases due to demography...



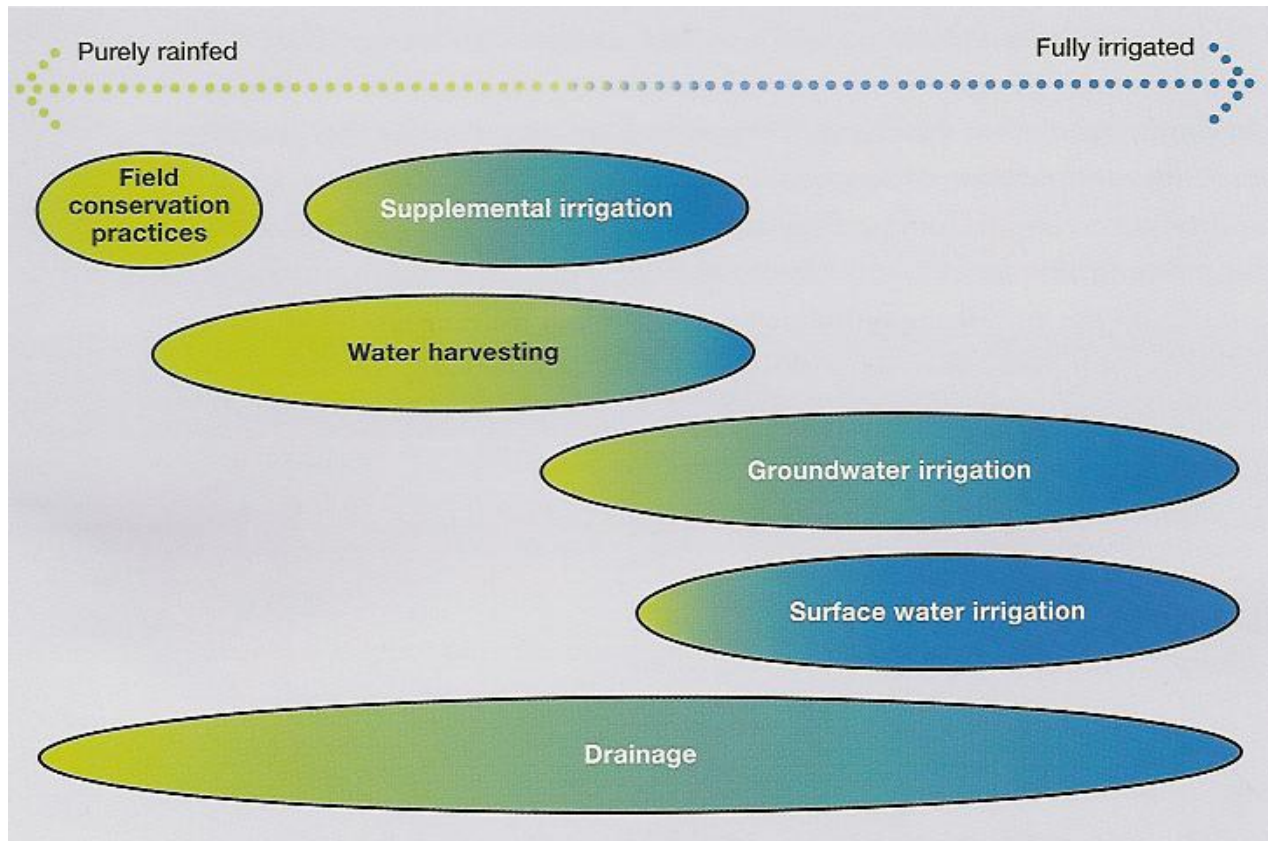
... and due to diets diversification !



d'après FAO



Higher productivity needs better agricultural water management



Diverse options for agricultural water management

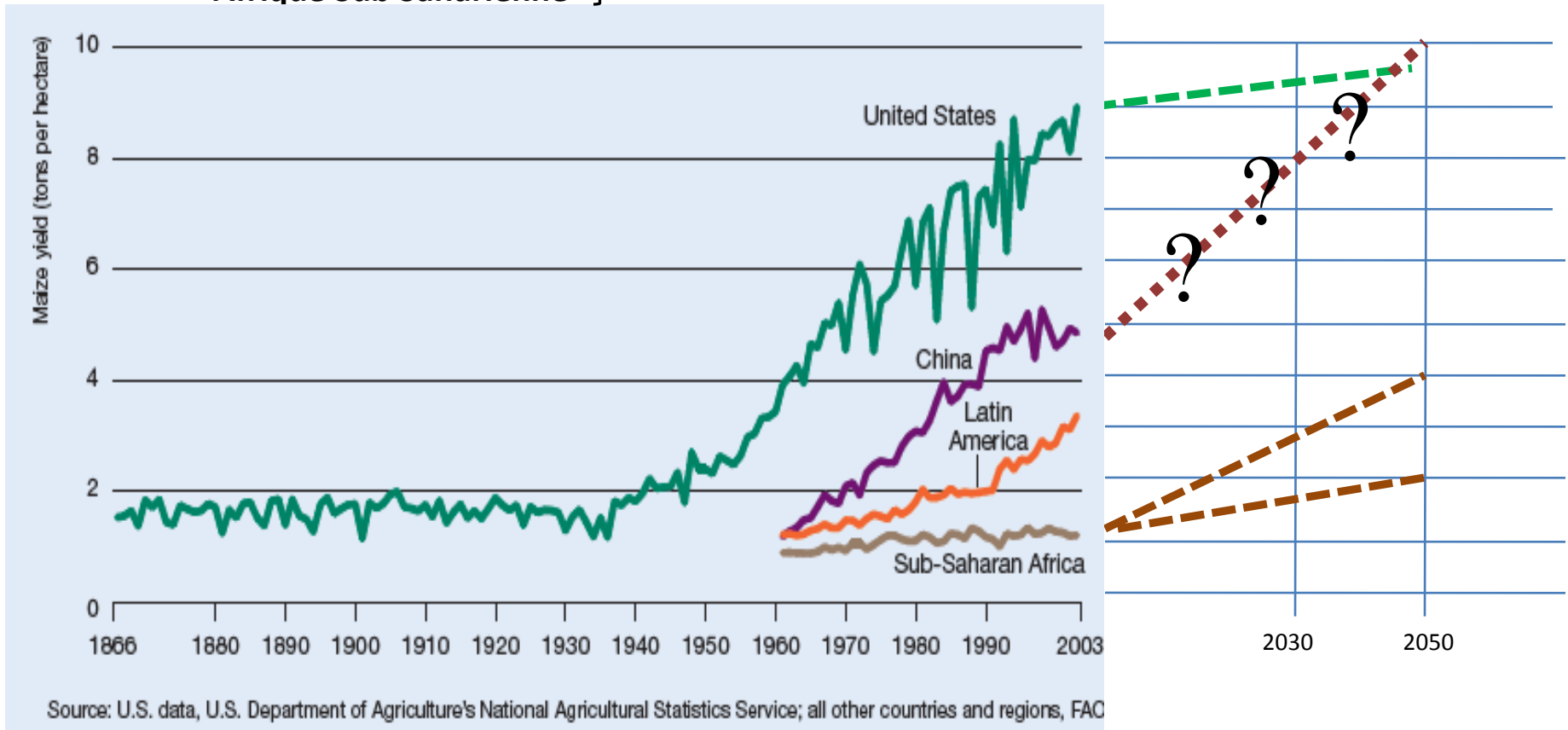
(International Water Management Institute, 2007)

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The rapid growth in food production needs water !

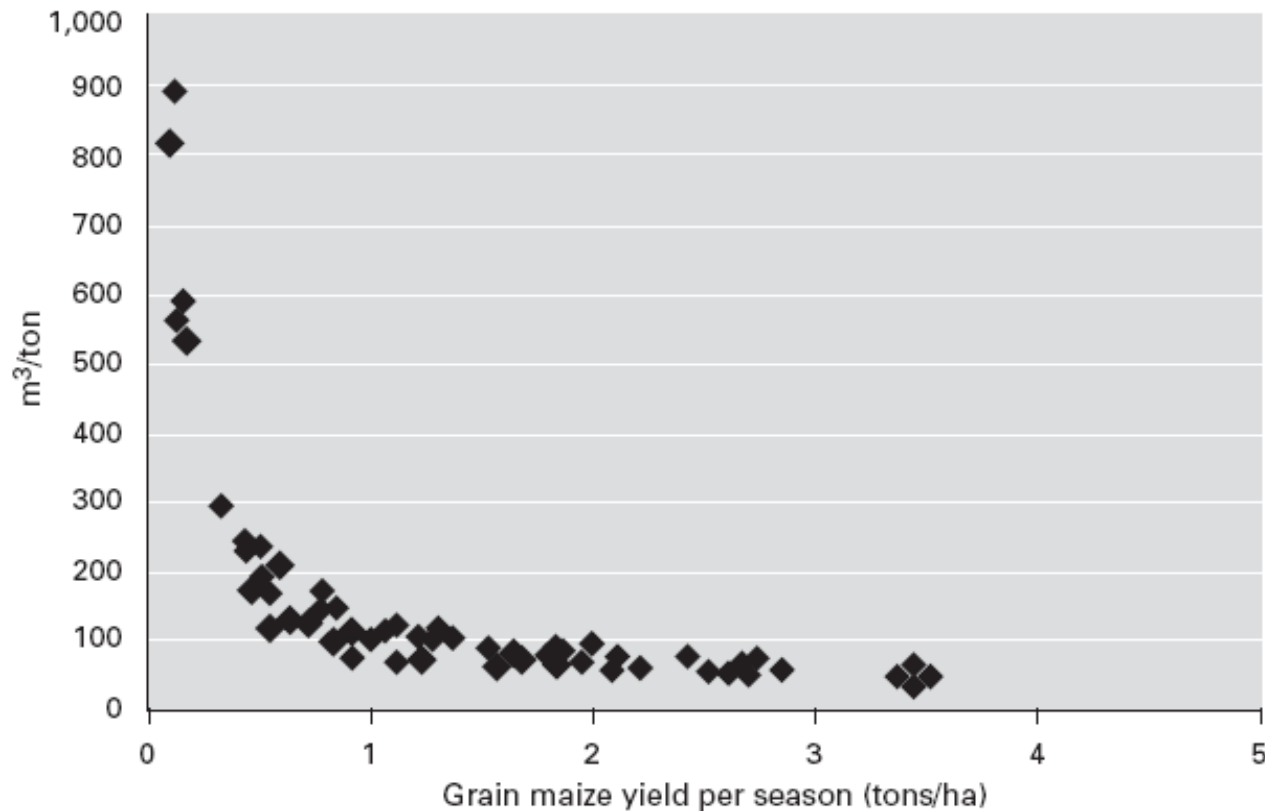
- **China with 400 bil m3** (Jianxin Mu)
 - **USA - UE**
 - **Afrique Sub Saharienne**
- } (IWMI Comprehensive Assessment)



Maize : Future yield scenarios in tons / hectare



Increasing low yields will increase water use efficiency

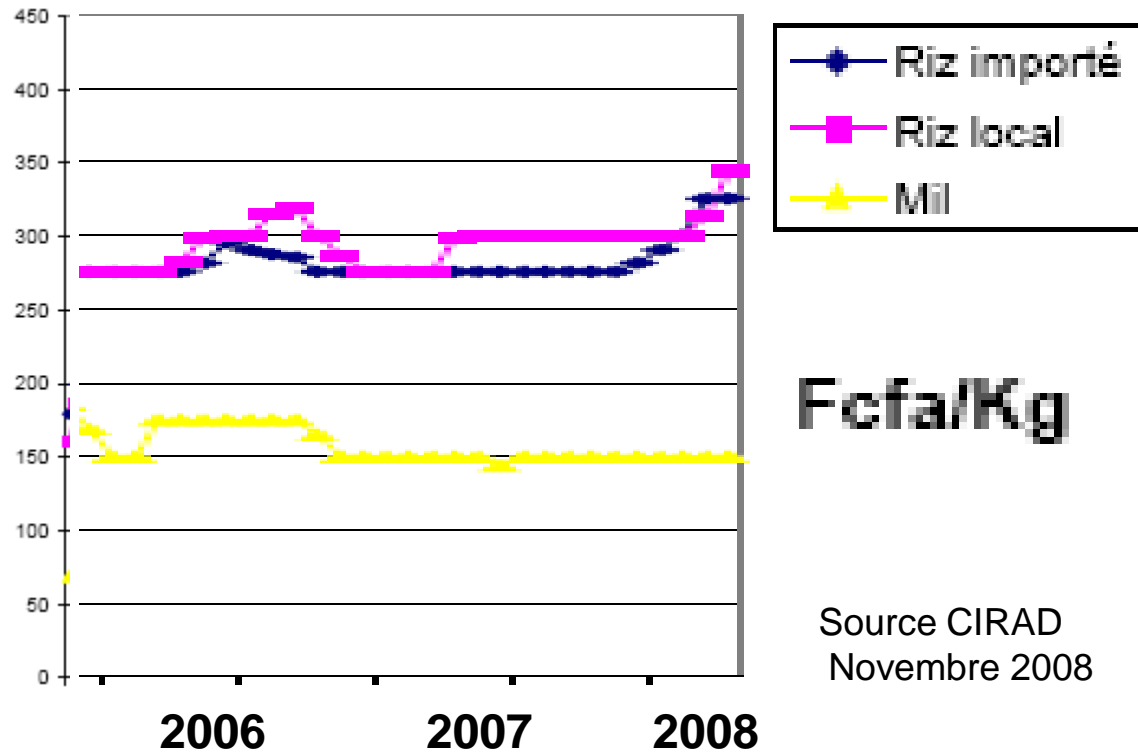


Relation between yield in ton/ha and water use in m³ /ton for maize



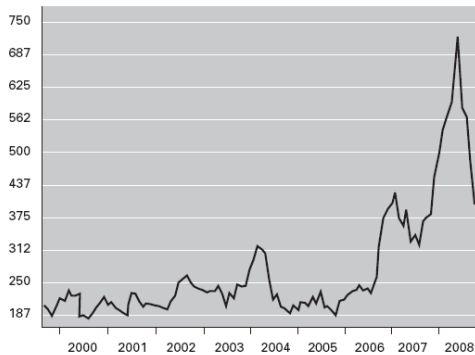
Global prices: a positive but limited effect on farm-gate prices

Prix à la consommation à Bamako



Fcfa/Kg

Source CIRAD
Novembre 2008



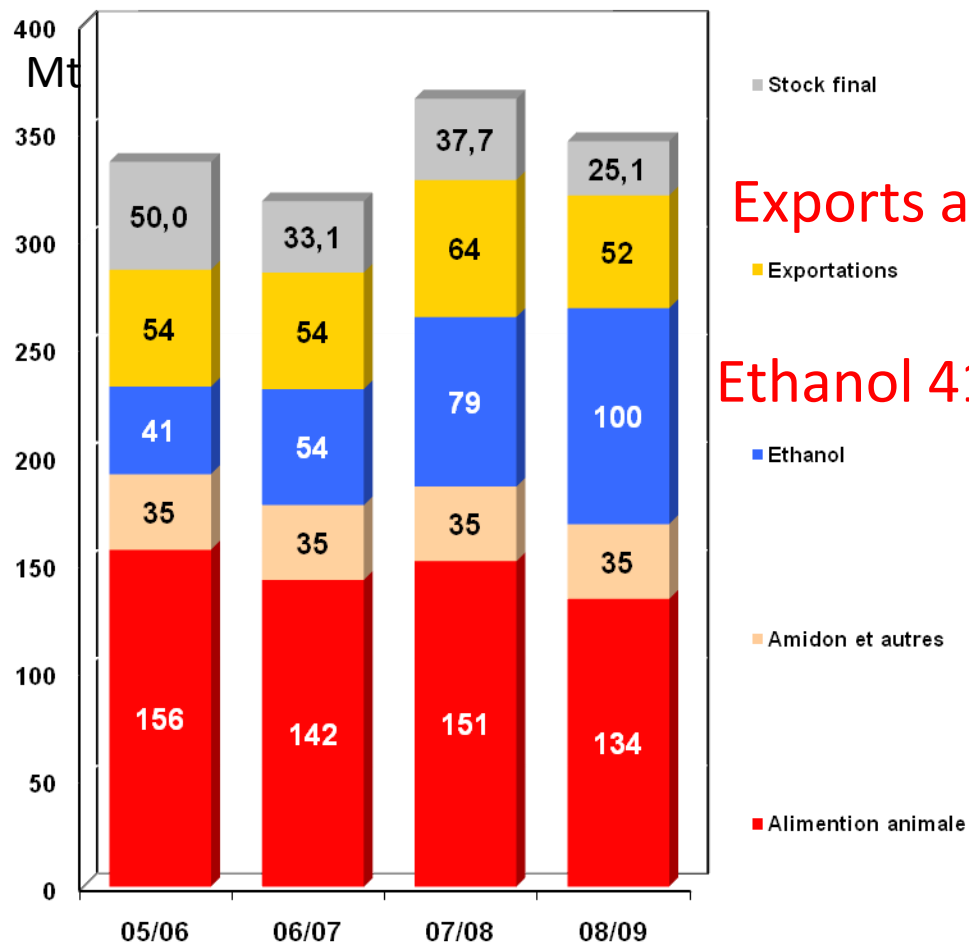
Global prices

Prices in Mali : Rice and Mil



USA : the rapid increase in ethanol production does not affect exports !

USA Maize :
forecast 08/09
million tons

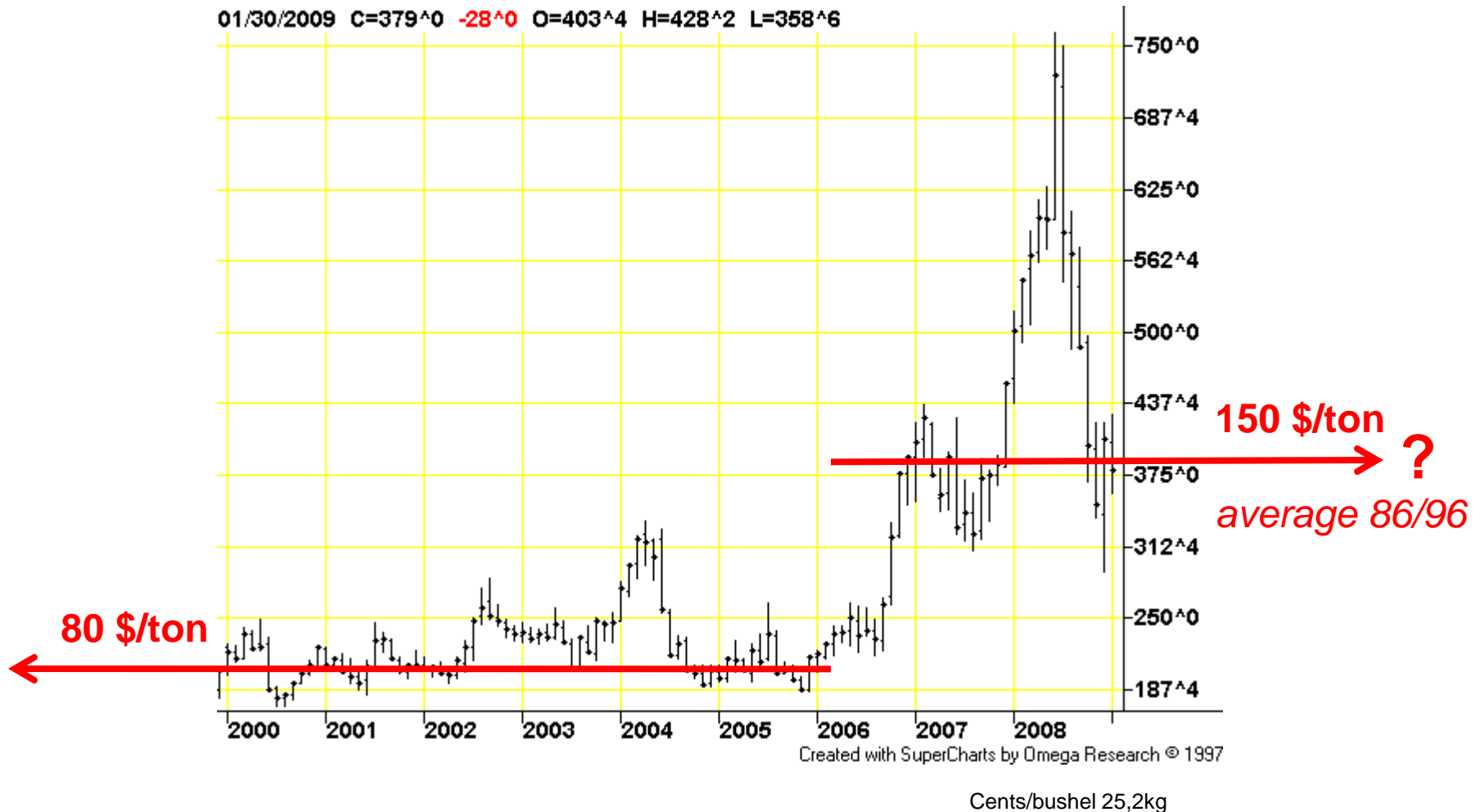


Exports around 50 Mt

Ethanol 41 → 100 Mt



Prices: volatility or stability at the previous level ?



CBOT : Maize :

June 2008 reversal , January 2009 Stabilization?



Irrigation water withdrawn for ethanol, less than 2% of the agriculture water...

	Water withdrawn km3	% Ethanol Water Agriculture Water
Ethanol Water 2008	26,9	1,0 %
Ethanol Water 2017	46,8	1,8 %
Agriculture Water	2662,0	

source: Hoogeveen et al.2008



Conclusion, three contributions:

- **Increasing the productivity** of agricultural water is crucial for doubling the food production; targeting low yields (< 2 t/ha) will reduce evaporation and contribute to poverty alleviation.
- **Higher agricultural prices**, an opportunity for new investments in agricultural water management; bio-fuels should help to sustain prices if integrated in rural development.
- Empowering farmers on **local markets** will result in better prices at farm gate; better income for farmers should also result in a better **financial sustainability of irrigation services**.

