

Shifts and emerging trends in commodity production and trade flows

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QUNO workshop

« *New Framework for Trade and Investment in Agriculture* »

22 January 2014

Trends in commodity production and trade flows

- I. What have been the biggest changes ?

- II. What has not changed?

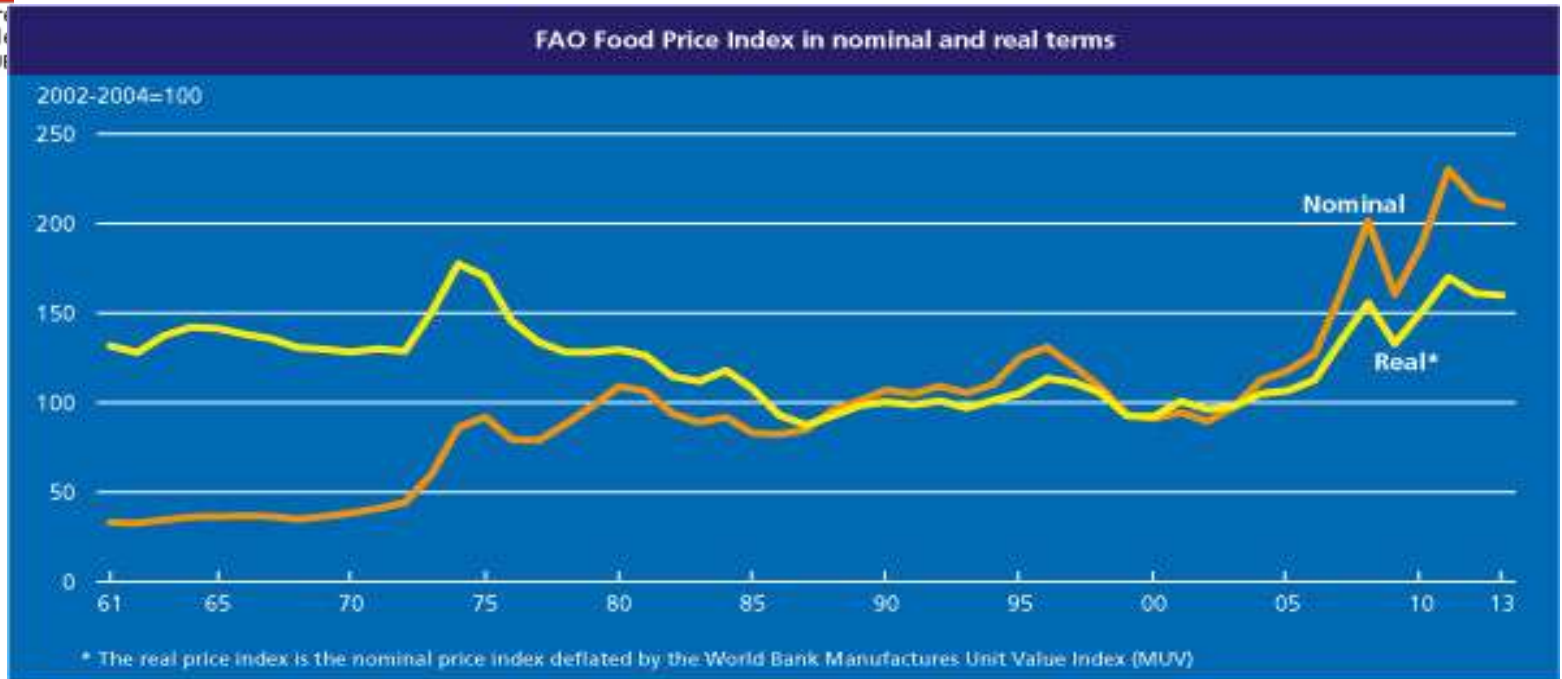
I. What have been the biggest changes ?

Focus on :

1. Prices: spikes and volatility
2. Source of production increase
3. Shift of market power on international markets
4. Landscape of agricultural policies

Other major changes s.a.demand (-biofuels, population growth and diets-), finance, investments, climate change, employment etc. discussed during the day.

1. Prices: spikes and volatility

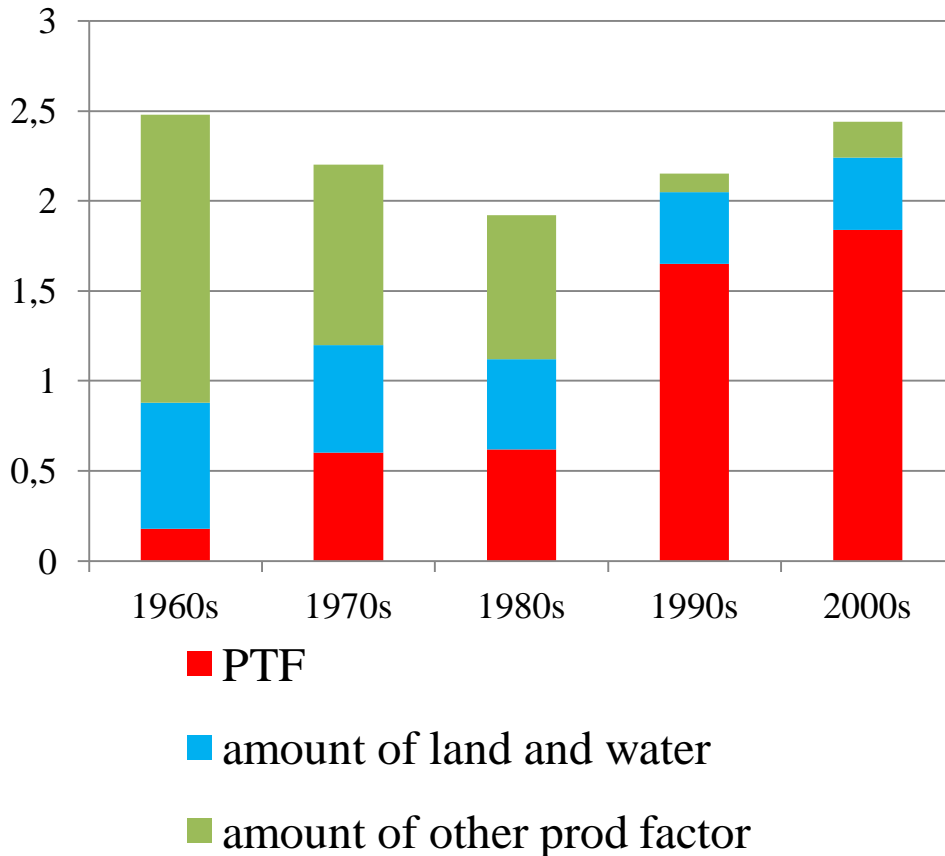


Source: FAO

- ⇒ Causes are numerous and **responsability is debated**
- ⇒ Often **volatility on local markets** is even higher than on intl
- ⇒ Related to *the financialization of agricultural markets*

2. Source of production increase has switched

Contribution to agricultural production growth (%)



Output growth increasingly led by **technical and organisational progress** (total factor productivity TFP) rather **than increase in input use**.

TFP does not presume the type of progress: Could have come from adoption of agro-ecological practices as well as GMOs seeds (needs to be studied more in depth).

Source : Douillet et Girard 2013 from Fuglie Ket al. 2012

TOTAL FACTOR PRODUCTIVITY

The **ratio** of
**agricultural
outputs** to
inputs



TFP increases when
outputs rise
and **inputs remain**
constant.

With finite resources,
TFP must increase
to sustainably provide for
9 billion people in 2050.



Source: Global Harvest

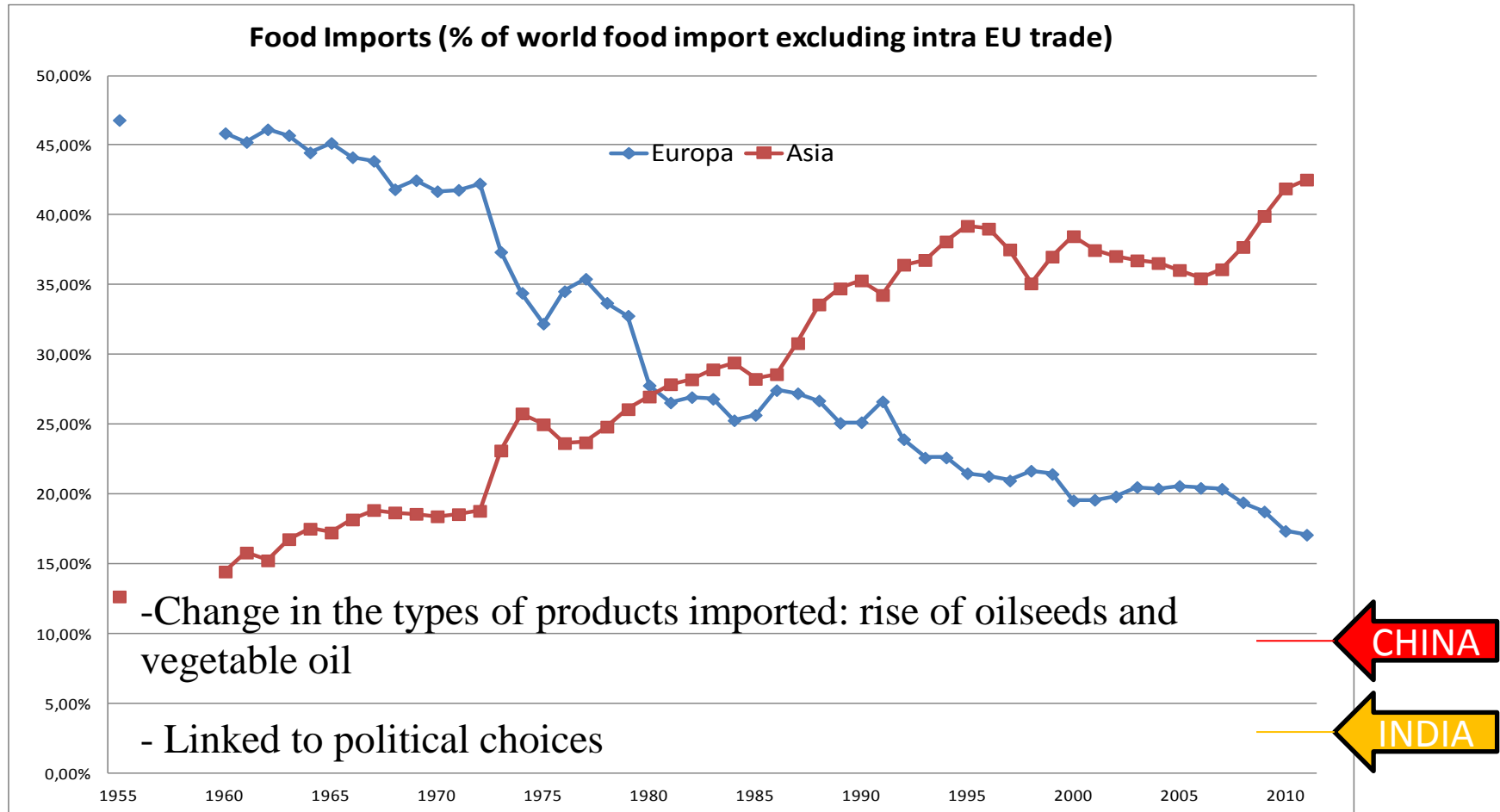
3. Market shares on international markets have changed

Is world trade more concentrated or more dispersed in terms of firms ? of countries ?

- Looking at transnational firms, market shares of the biggest ones have increased *cf. expertise of participants*
- Looking at trade flows between countries, world trade is more dispersed (Daviron and Douillet 2013).

3. Market shares on international markets have changed

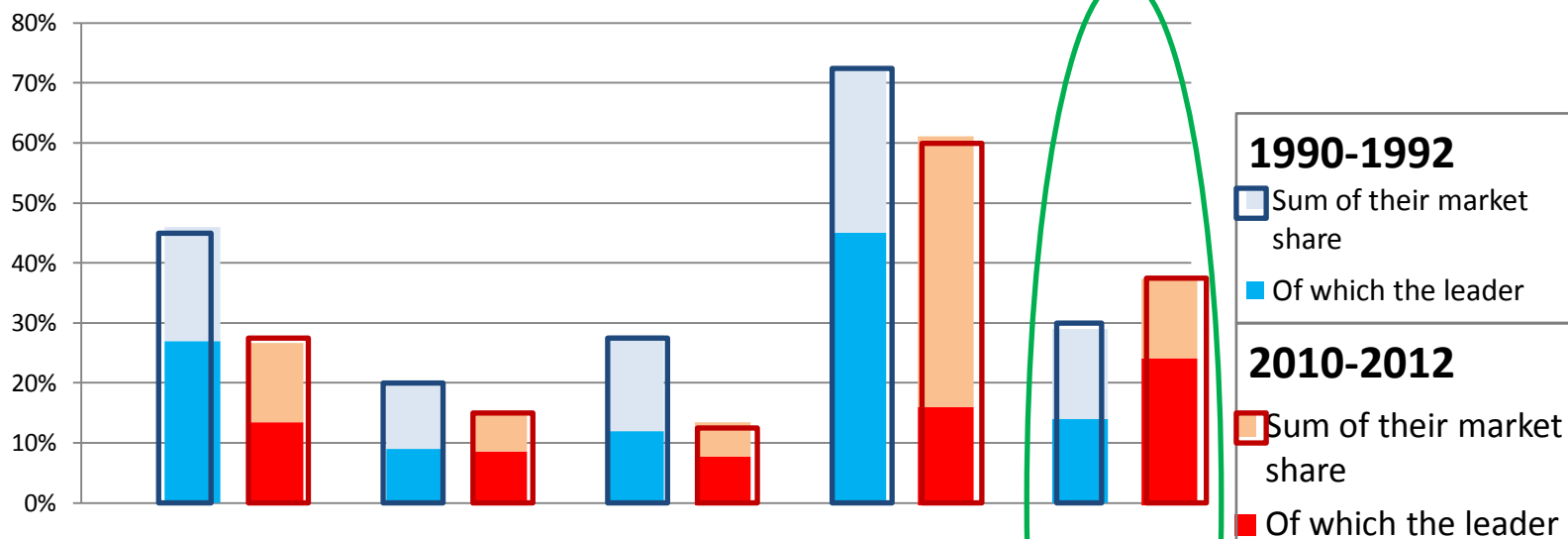
Changeover from Europe to Asia for imports



Source: Daviron and Douillet 2013, based on COMTRADE data

3. Market shares on international markets have changed

The decreasing share of the three major importing countries



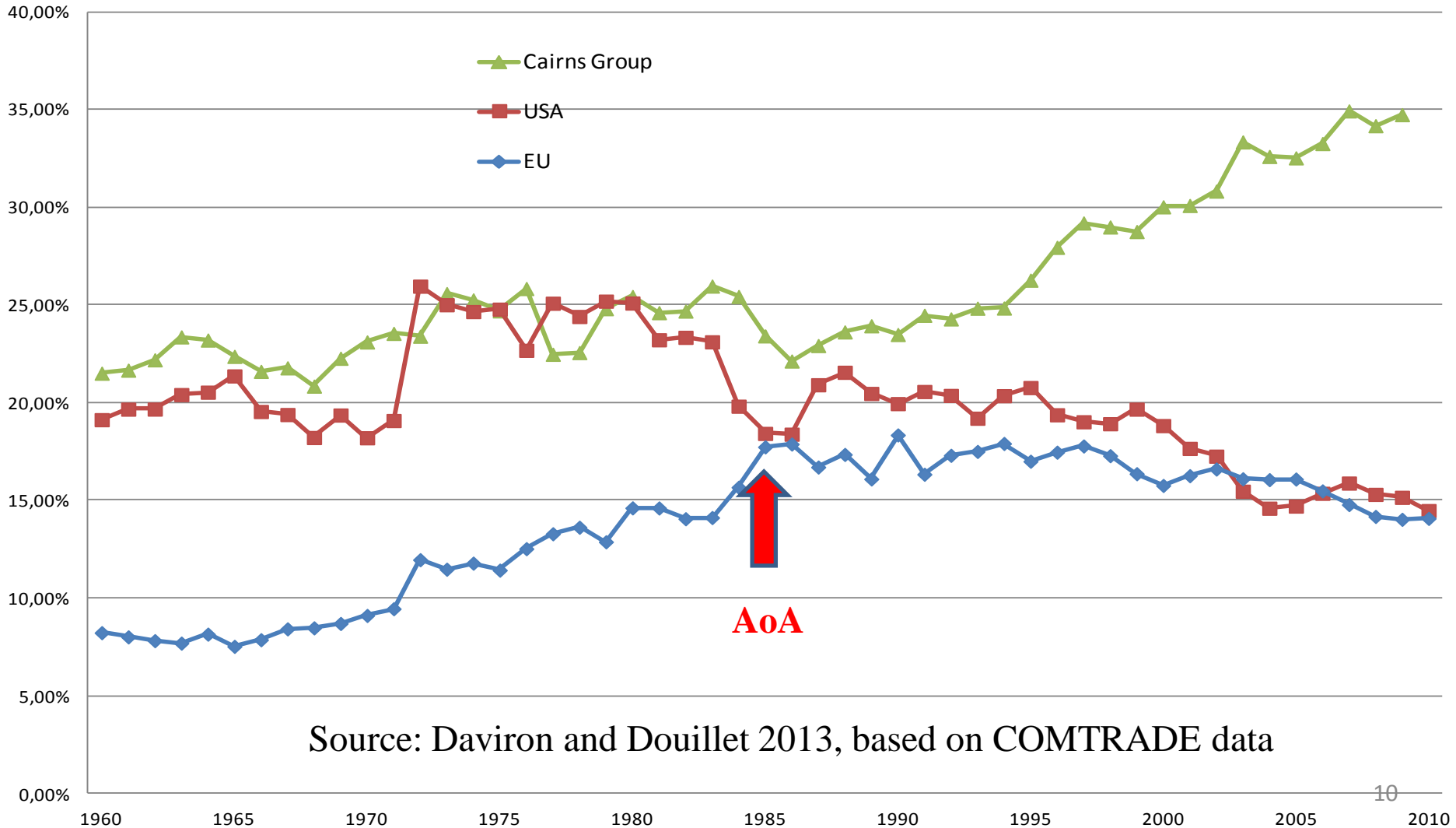
		Corn	Rice	Wheat	Oilseeds	Vegetable oil
<i>Three major importing countries</i>	1990-1992	Japan, South Korea, Russia	Iran, Brazil, Saudi Arabia	Russie, Chine, Egypte	EU, Japan, Taiwan	EU, Chine, Pakistan
	2010-2012	Japan, Mexico, EU	Nigeria, Indonesia, China	Egypte, Brésil, Indonésie	China, EU, Japan	India, China, EU

Exception

Source:
Daviron and Douillet, 2013

3. Market shares on international markets have changed

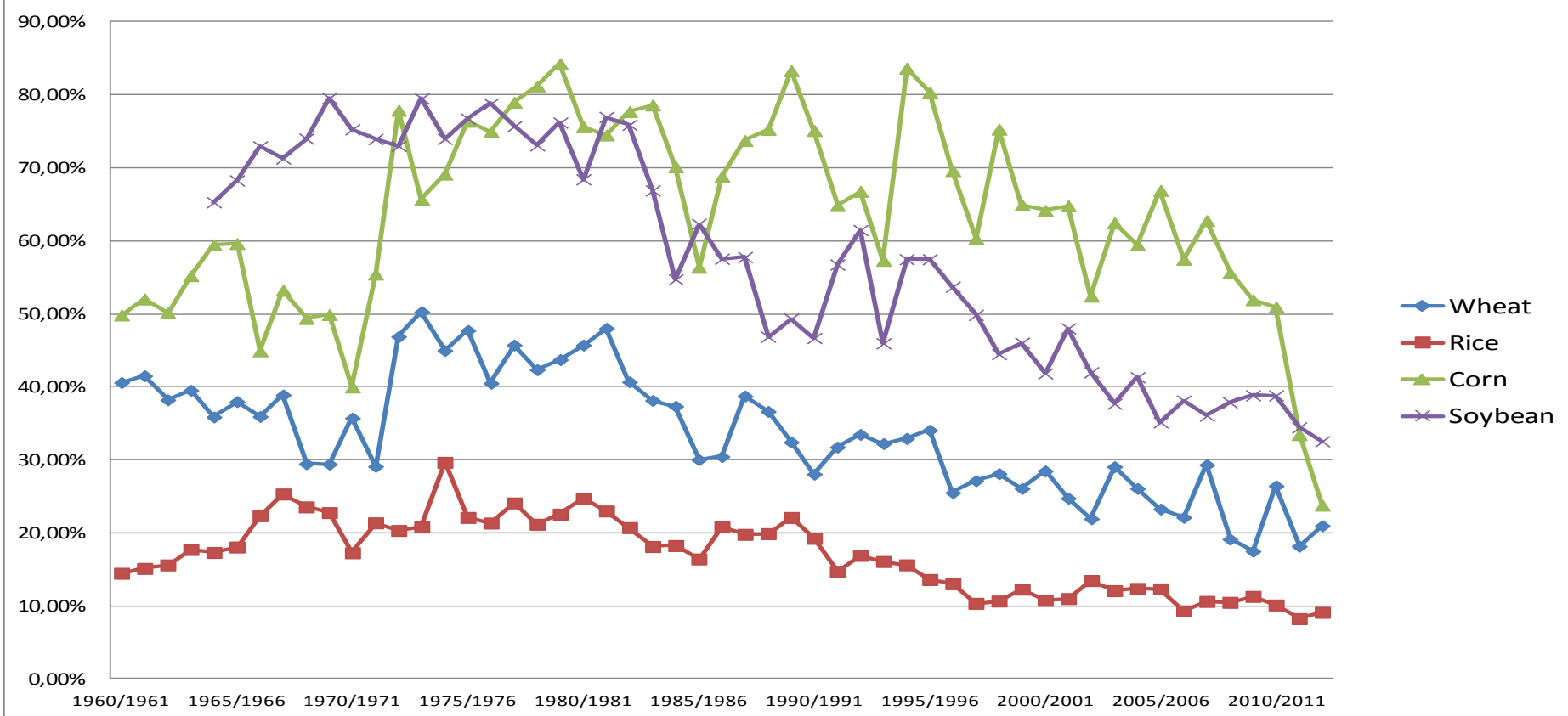
Non tropical food Exports (% of world exports excluding intra EU trade)



3. Market shares on international markets have changed

Declining supremacy of the USA

US exports of grains (% of world exports)



Source: Daviron and Douillet 2013, Based on data from USDA/PSD

4. Landscape of agricultural policies has changed

Emerging economies have increased their support to agriculture

	PSE as a % share of agricultural receipt						PSE (millions US \$)
	1986-89	1990-94	1995-99	2000-04	2005-09	2010-12	2010-12
High Income Countries	31%	28%	27%	26%	20%	14%	155 028
Australia	9%	9%	5%	4%	4%	3%	1 371
Canada	33%	28%	16%	20%	17%	15%	7 467
Switzerland	75%	72%	70%	70%	60%	55%	5 730
EU	37%	36%	35%	33%	25%	19%	105 305
Japan	62%	57%	59%	57%	50%	54%	61
Norway	69%	71%	68%	69%	61%	61%	3 952
USA	22%	17%	17%	19%	11%	8%	29 913
Emerging economies			3%	9%	10%	14%	210 764
Brazil			-9%	5%	5%	5%	8 728
Chile		10%	9%	7%	4%	3%	342
China		-6%	1%	6%	9%	15%	135 367
Indonesia		4%	-8%	9%	5%	19%	23 570
Korea	72%	73%	65%	60%	55%	49%	19
Mexico	6%	25%	11%	20%	13%	13%	6 809
Russia	79%	53%	14%	12%	18%	16%	14 979
Turkey	21%	29%	29%	28%	29%	24%	18 606

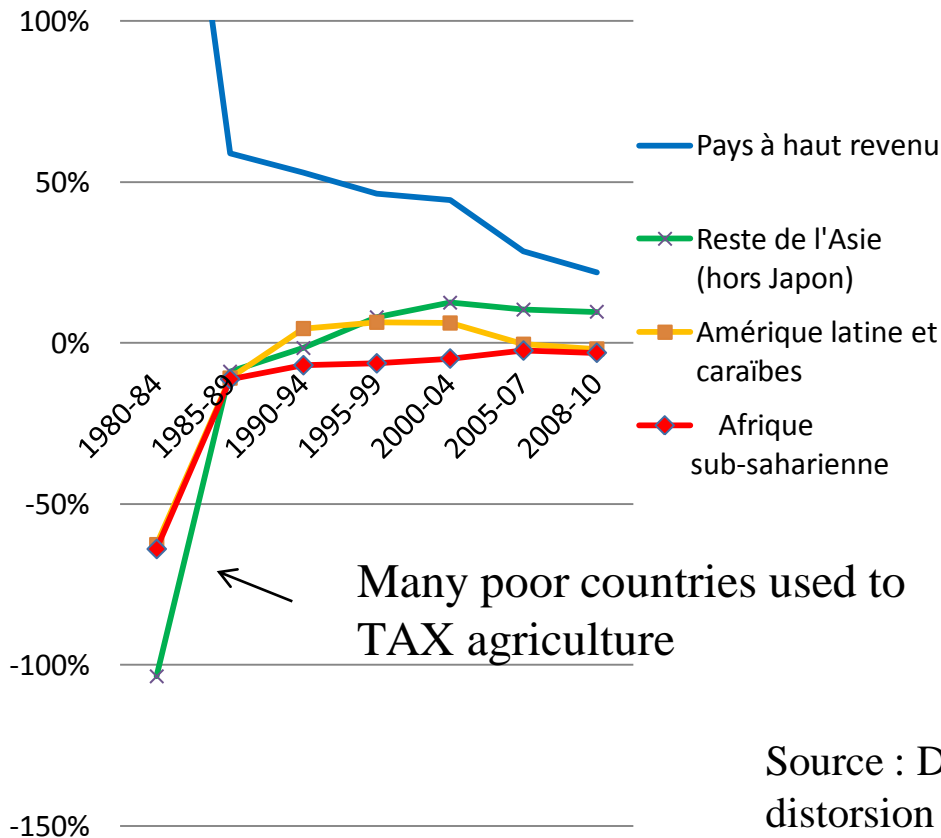
Source : Debar and Douillet 2014 from OECD

Note : EU includes members in of the European Union as they integrated it

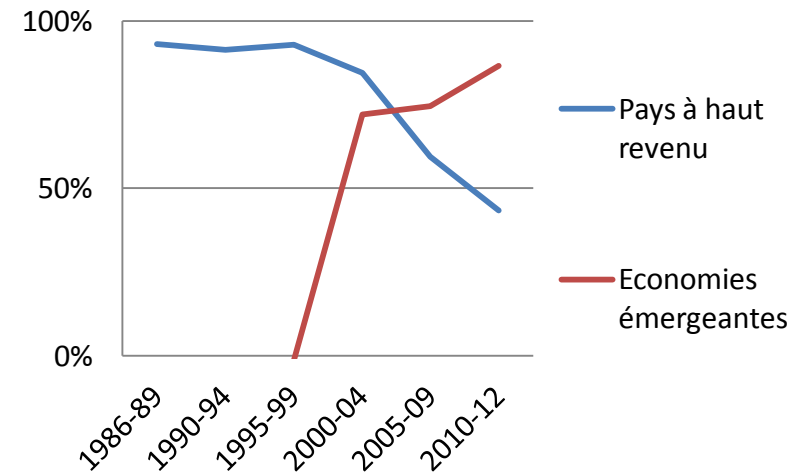
4. Landscape of agricultural policies has changed

Wide regional disparities

Total National Rate of Assistance to agriculture (WB)



Share of distortive support (% of PSE) (OECD)



Emerging economies increasingly use support linked to production.

Source : Debar and Douillet 2014, from World Bank distortion database and OECD PPSE data

II. What has not changed ?

1. « Internationalization » has kept limited
2. Most farmers are still smallholder
3. Family farms produce most of our food
4. Differences in labour productivity are still wide

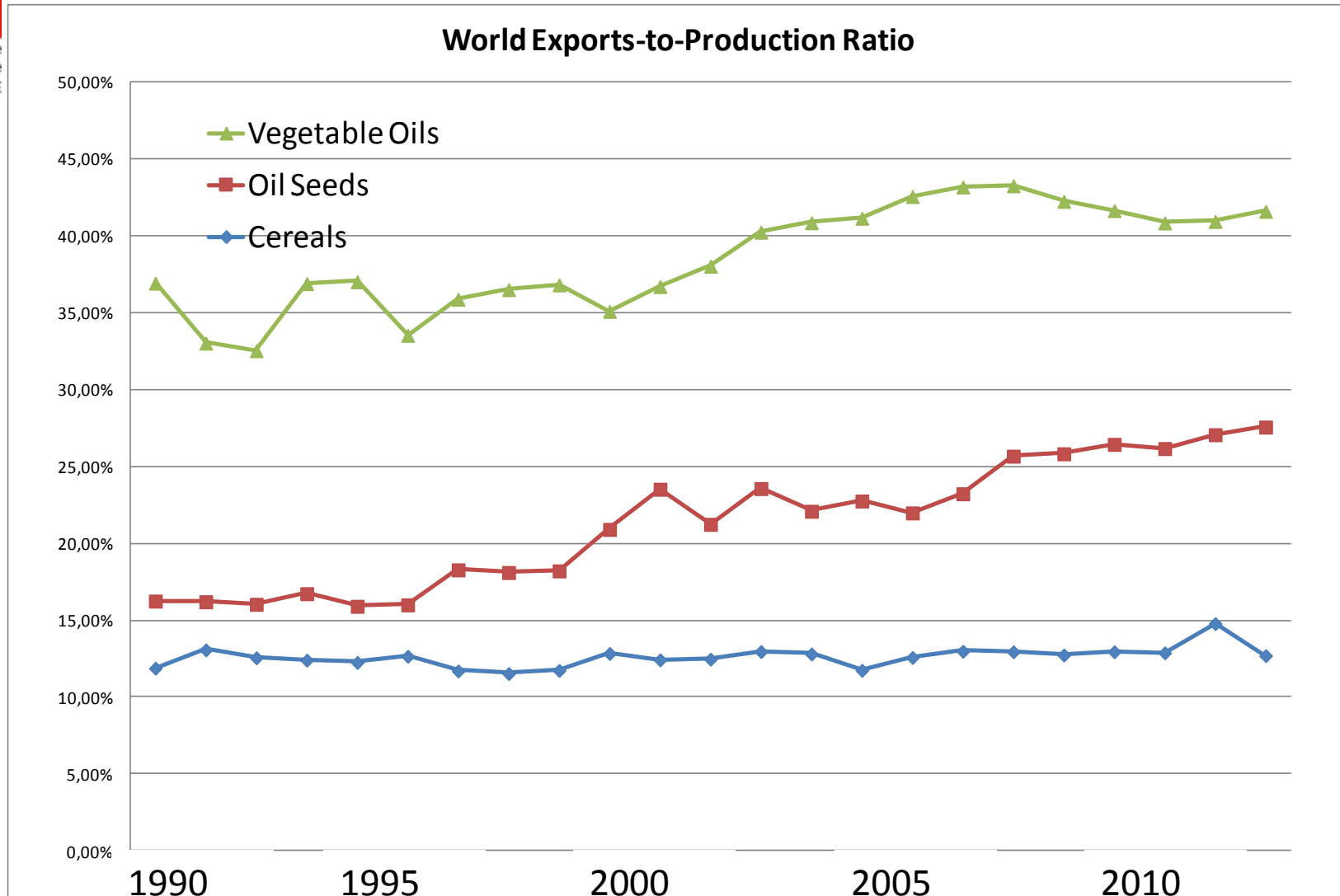
1. « Internationalization » has kept limited

Growth rate of international food trade and world food production in volume (excluding intra-EU trade), 1990-2011

	1990-1994	1995-1999	2000-2004	2005-2009	2010-2011
International Food trade	3.8%	5.0%	3.7%	2.9%	2.5%
World Food Production	2.0%	2.4%	2.4%	2.8%	2.8%

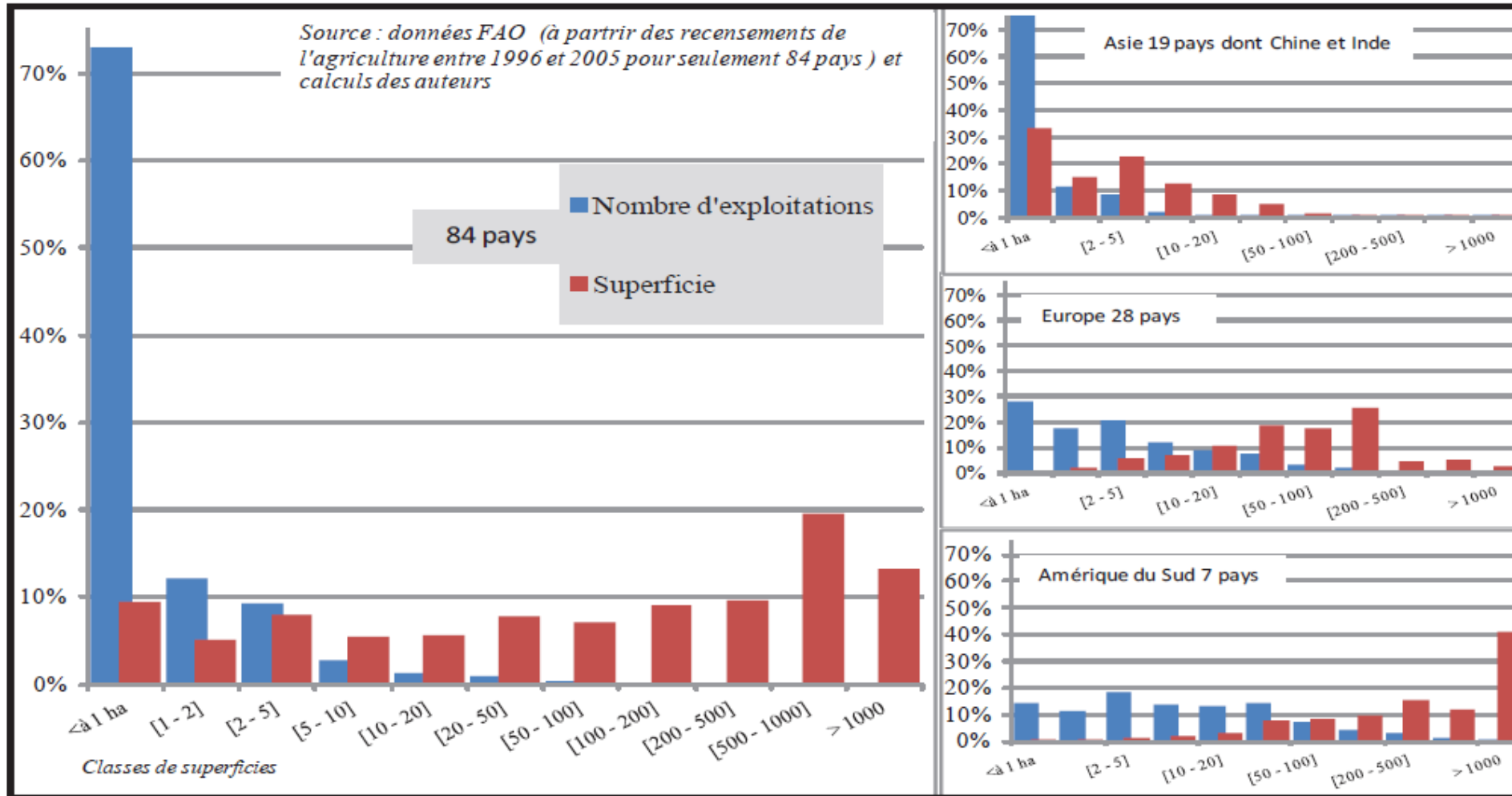
Source: Daviron and Douillet 2013

1. « Internationalization » has kept limited



2. Most farmers are still smallholder

Figure II : Répartition des exploitations agricoles et des superficies par classes de superficie



Source: Cirad 2013 from FAOstat

3. Family farms produce most of our food

Family farmers still grow most of what is consumed and traded.

Family farms (in green) contribution to world production: significant examples

rice



plantains (bananas)



roots and tubers



coffee



cocoa



palm oil



cotton



rubber

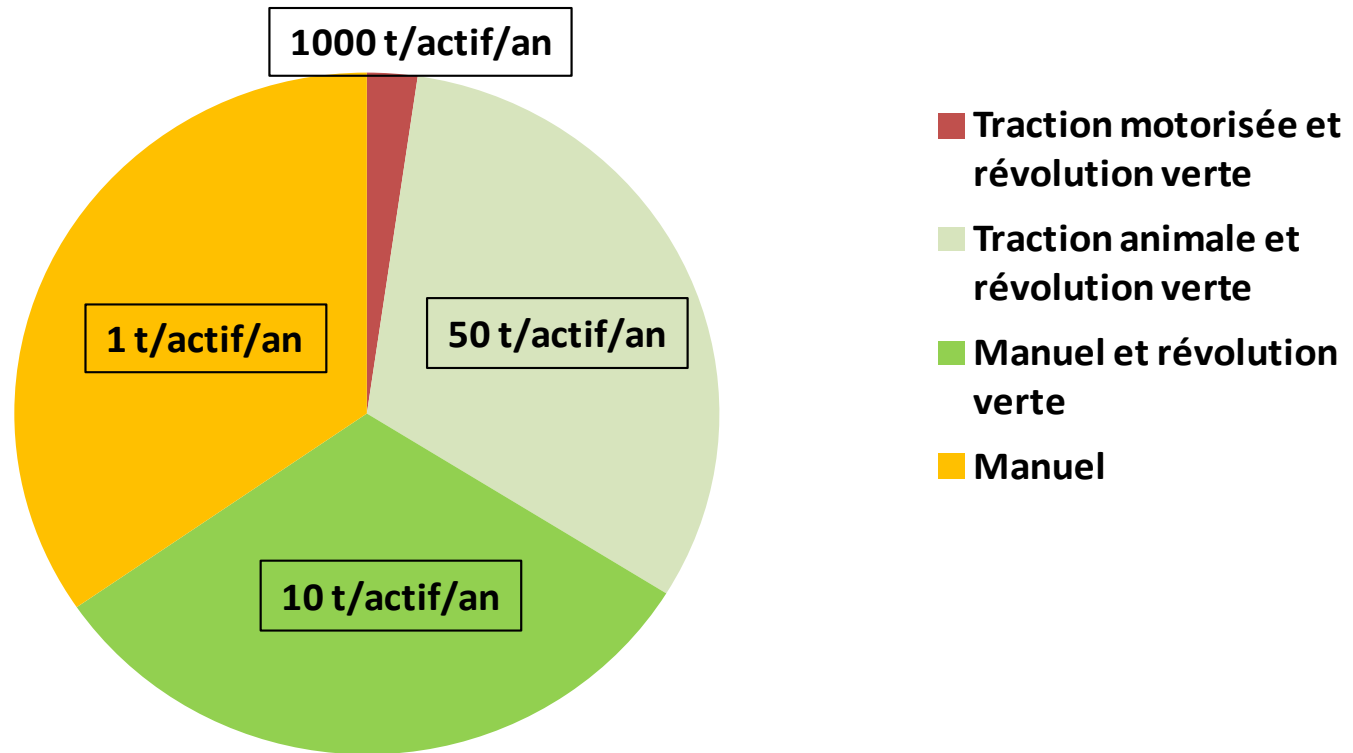


=> they compete globally through trade

Source : Cirad 2013 from FAO data and Cirad's experts say

4. Differences in labour productivity are still wide

Répartition des 1,3 milliards d'actifs agricole et écarts de productivité (en t équivalent céréale)



Source : Cirad 2013 from FAO data, inspired by Mazoyer 2001

Cirad, 2013. « Les agricultures familiales du monde. Définitions, contributions et politiques publiques. » AFD-CIRAD.

http://agriculture.gouv.fr/IMG/pdf/20130711_Rapport_final_MAAF_MAE_AFD_AF_CIRADBIS_31_Mai_complet_cle0197b5.pdf

Daviron B. and M. Douillet 2013 « Major players of the international food trade and the world food security” FOODSECURE working paper

http://www3.lei.wur.nl/FoodSecurePublications/FoodSecure-WP-12_final2014.pdf

Debar J.-C. and M. Douillet 2014 « Le nouveau paysage mondial du soutien à l’agriculture » FARM working paper *forthcoming (provisional version available upon request)*

Douillet M. and P. Girard, 2013. « Productivité agricole : des motifs d’inquiétude ? (I) Les concepts ». *English version coming very very soon*

<http://www.fondation-farm.org/spip.php?article873>

Fuglie K., Wang S. and V. E. Ball, 2012. “Productivity Growth in Agriculture: An International Perspective”. USDA.