Sorting the truth out from the lies in the explosion of world agricultural prices

Jacques Berthelot (jacques.berthelot4@wanadoo.fr), Solidarité (http:/solidarite.asso.fr)

June 1, 2008

Plan

The present paper aims at clarifying and ranking the main causes of the recent explosion in the agricultural and food prices such as disseminated by the media or even economists. On the other hand it does not come back on the well documented hunger riots nor on the agronomic and ecological aspects, particularly those linked to the production of biofuels.

We will begin by classifying the main causes of this agricultural prices explosion, that we will measure for the main products before analysing the causes per product and identifying the responsibility of the main countries – US, EU, China, India, Brazil – and of financial speculation. We will focus mainly on grains (cereals, rice and oilseeds), knowing that the surge in these feedstuffs components has been transmitted to meat and dairy prices.

I – Classification of the causes of the recent explosion in agricultural prices

One can distinguish the causes linked to the increased demand from those linked to a lower supply or to higher production costs, knowing that some causes have had short term effects while others correspond to long term trends, which recoup partially the distinction between conjunctural and structural causes.

This confusion of causes due to past or future trends with the more immediate ones is illustrated by the answers given by Gilles Hirzel, FAO Representative in France, in a debate organised by the newspaper Les Echos the 14 April 2008. To the question "*What is explaining the surge in commodities prices?*" Gilles Hirzel answers "*Clearly the climatic disruptions over the 2007 year. Then there are the population growth, the evolution of diets in emerging countries (they eat more meat, which exerts a pressure on cereals markets), the oil price surge and the emergence of biofuels production. But the true basic issue is the disinvestment in the agricultural sector for very many years*"[1]. All these causes are real but Hirzel seems to put on the same level the recent causes due to the climatic vagaries of 2007, the surge in the biofuels production and in oil prices with long term causes: the evolution of diets in emerging countries and the disinvestment in the agricultural sector of DCs.

[1] http://www.lesechos.fr/info/inter/4717336.htm

1) – Causes linked to demand

a) The main cause has been the soaring production of biofuels since 2006 which has reduced the volumes of cereals and oilseeds available for direct human consumption and led to the price hike of animal products having consumed feedstuffs.

b) The increased consumption of food products, linked to the rapid rise in the living standard of emerging countries such as China and India, which has fostered a high increase of their consumption of animal products and therefore of 'grains' (cereals and oilseeds). However this is clearly a trend which has been going on for many years and which cannot account for the progressive explosion of world agricultural prices in the last two years.

The world population growth in the long run – which should rise from 6.6 billion in July 2007 to 9.3 billion in July 2050, all this growth occurring only in developing countries (DCs) – can even less be responsible for this explosion. But it suggests the difficulties ahead to satisfy the food needs in 2050, the more so as 854 million human beings were still suffering from chronic under nutrition in 2001-03 and more than 2 billion from malnutrition (deficit in proteins, vitamins or trace elements).

c) More recently the massive financial speculation on the prices of agricultural commodities (and non agricultural ones, of which oil) linked to the collapse of securities and of the US real estate market (subprimes), the dollar depreciation, the surge in inflation and the lower economic growth in developed countries and many DCs.

d) But also the speculation by traders, relayed by precautionary purchases of consumers, expecting the continuation of prices hikes, and governmental imports at any price in countries such as the Philippines fearing their prolonged hikes and in order to discourage the speculation of national traders[2].

2) – Causes linked to supply

a) Production falls:

- in the short run, those due to natural disasters (drought or excessive rainfall);
- or, as trends going on for years, production increases at a lower pace than demand and leading to collapsing stocks. This results mainly from stagnating yields independently of disasters, to transfers of acreage from some products to others – particularly from staple food to export products – and, above all, from a reduced competitiveness of DCs agriculture due to imports at dumping prices. This is the fruit of the absurd agricultural trade rules – devised and fostered by the World Bank, the IMF, the WTO and developed countries – which have forced DCs to reduce drastically their import protection while allowing the dumping of developed countries products to be perpetuated under the cover of massive domestic agricultural subsidies benefiting also to exported products.

b) The explosion of oil prices: it has raised badly the cost of agricultural inputs and of national and international transport charges. It has also justified the political decisions to accelerate the production of biofuels. The soaring oil prices are linked not only to the high growth of emerging countries, particularly China and India, compared to a lower growth in oil production, but also to the sharp dollar depreciation and the willingness of exporting countries to maintain their purchasing power vis-à-vis countries outside the dollar zone.

[2] http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aAodCAZSqloo

c) More recently the export restrictions or embargos on food products in many exporting DCs so as to guarantee the food security of their citizens at affordable prices, which has accelerated the world prices explosion.

II – The recent upsurge in the prices of the main agricultural products devoted to food

Let us remember that the US are 'price makers' for the world prices of 'grains' (cereals, oilseeds, pulses)[3], the other exporters basing their own prices on the US FOB prices, once they have been quoted in Chicago, Kansas City or Minneapolis. And, as the price of grains reverberates on the prices of animal products fed from them, this underlines already the EU major role in the explosion of most world agricultural prices.

1) Table 1 shows the monthly evolution of prices of the main agricultural products devoted to food in the commodities futures exchanges making the benchmark prices (the US ones for cereals and soybean) since July 2007, for January and July 2006 and January 2007. The prices are in US dollars per tonne ($/t), except for sugar and cotton (in US cents per pound) and cocoa (in sterling pounds per tonne).

Table 1 – Explosion of agricultural prices from January 2006 to February-April 2008

	Jan.	July	Jan.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May
Wheat HRW-2 FOB Gulf	170	213	209	246	273	343	354	335	381	377	439	482	389	361
Wheat SRW-2 FOB Gulf	143	146	176	217	250	323	327	308	345	340	394	397	309	267
Corn US n°2, FOB Gulf	103	114	166	149	151	158	165	171	183	203	222	233	245	251
Sorghum US FOB Gulf	107	128	175	159	170	179	174	172	201	226	224	230	242	245
Thai rice 100% B	303	322	318	337	335	333	338	358	376	385	463	567	853	854
Soybean US 1 FOB Gulf	233	235	275	313	321	357	369	403	440	471	524	492	501	489
Rapeseed CIF Hamb.	263	322	356	405	439	485	521	562	597	643	693	754		
Soybean oil FOB Amst.	532	630	697	885	908	959	1012	1138	1164	1276	1400	1476		
Palm oil CIF Rotterdam	424	471	599	811	821	835	881	952	950	1059	1160	1249		
Rapeseed oil FOB "	733	822	818	921	955	1051	1195	1273	1397	1428	1434	1518		
Copra oil CIF Rotterdam	569	583	731	929	910	930	1010	1131	1153	1285	1382	1471		
Peanut oil "	930	928	1180	1342	1404	1445	1486	1691	1777	1861	1958	2203		
Soybean meal "	207	202	247	289	297	342	384	397	425	434	453	443		
Rape meal FOB Hamb.	136	123	172	191	223	269	272	260	272	308	345	359		
Sugar (ISA) (cents/lb)	15.41	16.14	11.01	10.16	9.84	9.75	9.99	10.09	10.69	11.76	13.37			
Skim milk powd. Oceania	2163	2075	2900	5150	5083	4950	4967	4838	4400	4250	4000	3775	3500	
Fat milk powder FOB "	2175	2100	2850	4650	4750	4750	4950	4838	4800	4400	4550	4750	4550	
Butter FOB Oceania	1950	1700	1938	3125	3533	3700	3800	4150	4050	4050	4050	4000	3950	
Frozen bov. meat Argen.	1965	2305	2462	2093	2164	2509	2514	2583	2684	2743	3059			
Chick. meat FOB Brazil	1314	1140	1268	1476	1464	1501	1519	1598	1461	1726	1761			
Frozen pork FOB US	2053	1948	2116	2073	2140	2163	2155	2141	2074	2101	2006			
Sheep meat NZ London	3749	4141	3979	4087	4111	4295	4393	4432	4313	4294	4502			
Cotton Index A (cents/lb)	58.94	55.49	59.48	63.70	58.71	61.08	64.40	61.98	65.57	68.13	69.22	83	74	
Coffee comp. price ICO "	95.8	88.6	107.7	106.2	108.0	113.2	115.7	114.4	118.2	122.3	138.8	136.2	126.6	
Cacao ELCM:CN8 (£/t)				1141	1058	997	1000	980	1059	1090	1250	1428	1321	

Sources: http://www.fao.org/es/esc/prices/PricesServlet.jsp?lang=en; http://www.ico.org/prices/p2.htm; http://fr.advfn.com/p.php?pid=cmmulticharts&cb=1208103566&symbol=ELCM%5ECN8&redir=1; * prix à terme de mai le 11 avril 2008

The price explosion has affected almost all products, with the exception of sugar and pig and sheep meats. The rise of tropical products prices (cotton, coffee, cocoa) has been much lower than that of staple products (cereals, oilseeds, dairy) produced also or mainly in temperate countries, even if their rise has become more pronounced since November 2007.

One may classify the agricultural products according to their level of increase from January 2006 to February 2008 (we do not avail of the quotations of March and April for all products) and their date of peak price.

[3] Daryll E. Ray, Daniel G. De La Torre Ugarte, Kelly J. Tiller, *Rethinking U.S. Agricultural Policy: Changing Course to Secure Farmer Livelihoods Worldwide*, September 2003.

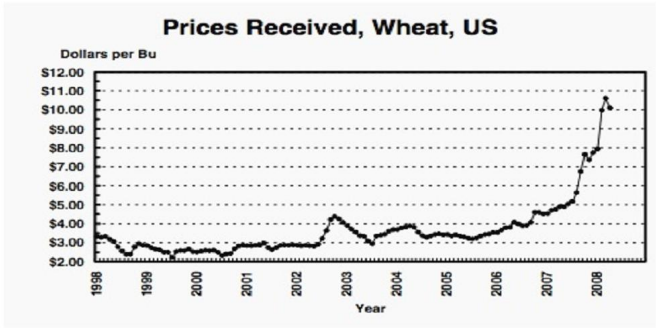
2) The wheat price: the HRW (Hard Red Winter) and SRW (Soft Red Winter) prices have both been multiplied by 2.8 until March 2008. However both prices have already collapsed by 43% for the first and 33% for the second between the last week of February and the second week of May 2008 and the fall may continue given the expected larger production resulting from the higher surge in wheat prices than that of other grains (corn, soybean).

Table 2 shows the gaps in the surging prices paid to US farmers from 2004-05 to 2007-08[4] and up to April 2008, which explain that planting forecasts for 2008 decline by 8% for corn but increase by 6% for wheat and 18% for soybean[5]. The price in $ per bushel has been converted in $ per tonne ($/t), knowing that a bushel of corn makes 25.4 kg against 27.2 kg for a bushel of wheat or soybean.

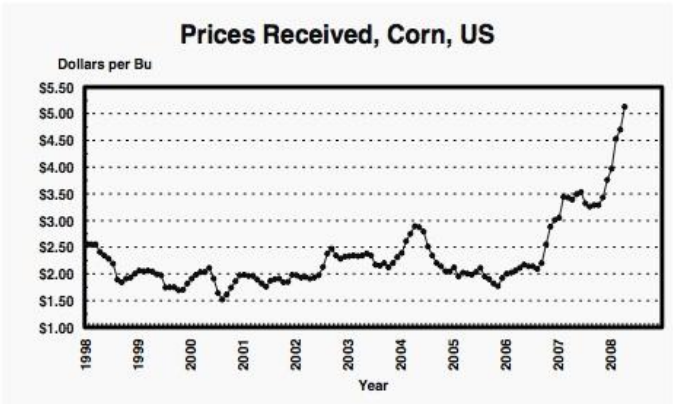
Table 2 – Comparison of US farm prices for wheat, corn and soybean from 2004-05 to 2007-08

$ per tonne	2004-05	2005-06	2006-07	2007-08	avril 08
All wheats	131	132	149	212	430*
Corn	97	77	90	133	190*
Soybean	278	219	208	305	438*

Sources: average farm price for civil years 2004 to 2007 (http://www.farmdoc.uiuc.edu/manage/uspricehistory/USPrice.asp); * average farm price for March 2008: http://usda.mannlib.cornell.edu/usda/current/AgriPric/AgriPric-03-28-2008.pdf



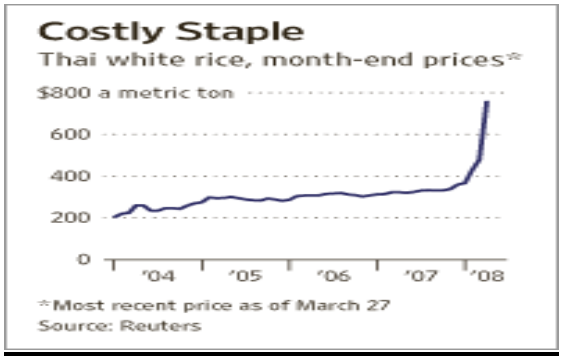
2) The corn price has been multiplied by 2.4 up to April 2008 and that of sorghum grain by 2.3 up to May 2008. The graph below shows the explosion of corn price from 1998 to end April 2008. We have converted in $/tonne the prices given in $/bushel, knowing that w bushel of wheat or soybean weighs 27.2 kg and a bushel of corn 25.4 kg.



[4] The data in this paper refer mainly to marketing years, when is sold the production of the former production year. Thus, when comparing the production and export or import of 2007-08, one compares the harvest of 2007 with its trade until June 2008 (or another month according to products).

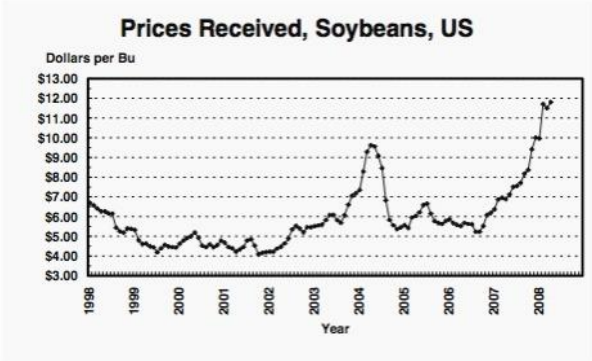
[5] http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1136

3) The rice price has almost not moved from January 2006 to October 2007 (+ 11%) but then it has skyrocketed progressively up to 894 $/t the 25 April 2008, a multiplication by 2.95 in relation to January 2006 or by 2.64 in relation to October 2007. On May 2 it has however flowed back to 854 $/t.



Source: http://www.peakoil.com/post627304.html

4) The prices of oilseeds: that of soybean has been multiplied by 2.2 from January 2006 to April 2008 and that of rapeseed by 2.9 from February 2006 to March 2008.

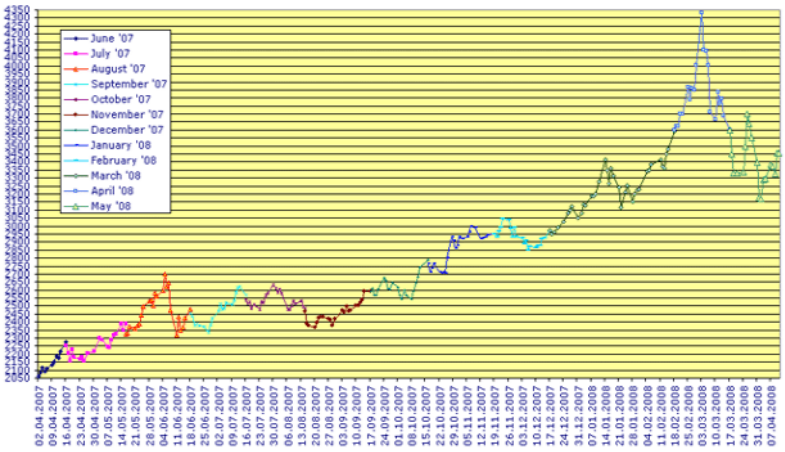


5) The prices of vegetable oils has also exploded, from January 2006 to January 2008, being multiplied by 2.6 for soybean oil, by 2.7 for palm oil, by 2% for rapeseed oil, by 2.4 for copra oil and by 2.1 for peanut oil.

Soybean oil futures price in Chicago in cents/pound from 2004 to 1st April 2008

Source: http://www.cmegroup.com/trading/commodities/grain-and-oilseed/soybean-oil.html

Palm oil futures price in Malaysia (roupees/t): 1st April 2007-7 April 2008



Source: http://www.palmoil.com/index.php?q=D1VTW1NASgIEAhEbVg9RAAYB

6) The price of oil meals has been multiplied by 2.1 for soybean up to March 2008 and by 2.6 for rapeseed. Here it is the EU which is the main responsible since its imports have increased by 2.2 Mt in 2007-08 on an increase of 4.6 Mt for global imports.

7) The price of dairy products has followed a contrasted path. The price of skimmed milk powder has been multiplied by 2.4 from January 2006 to July 2005 but, as it has fallen afterwards, it has been multiplied by only 1.6 from January 2006 to April 2008. The price of fat powder has been multiplied by 2.2 from January 2006 to August 2007 and has remained at that level in March 2008. Butter price has been multiplied by 2.1 from January 2006 to November 2007 and has decreased slightly since then.

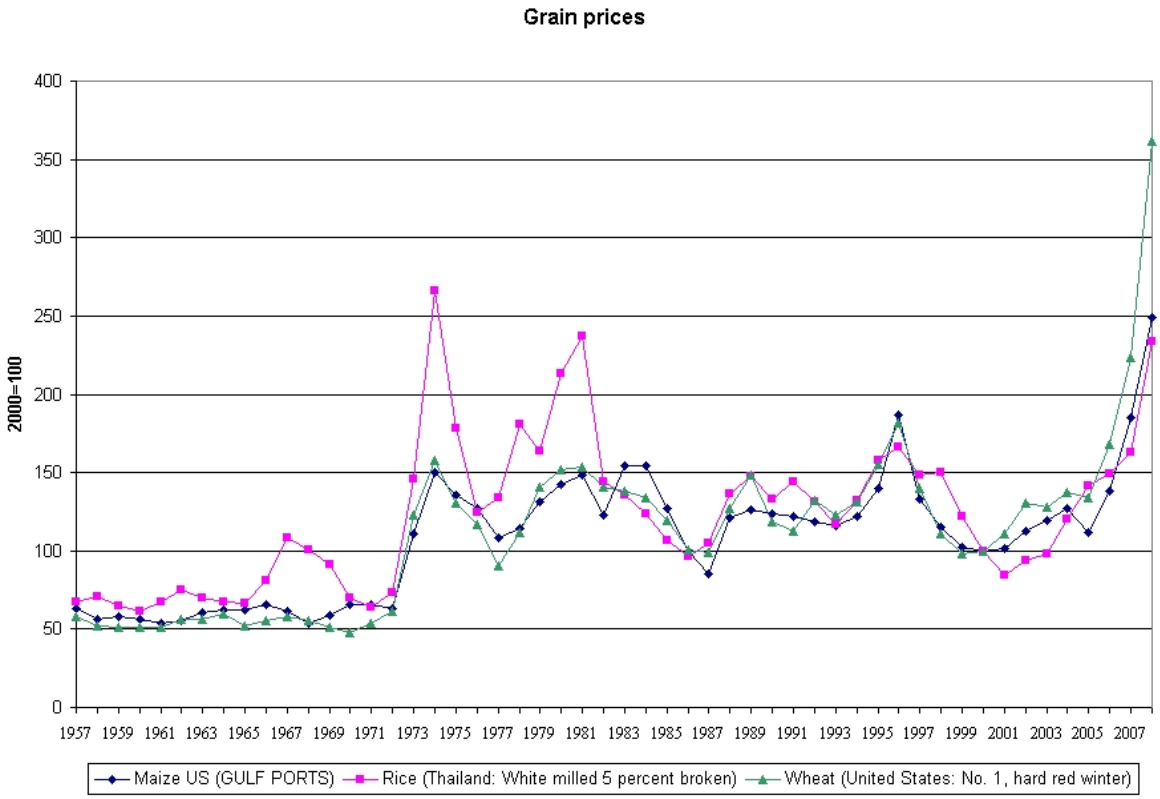
8) The price of bovine meat has risen by 56% (multiplied by 1.56) from January 2006 to February 2008. That of chicken meat has risen by 34% in the same period but by 54% from July 2006 to February 2008. That of ovine meat has risen by 20% from January 2006 to February 2008 and that of pig meat has decreased by 2.2%.

9) The prices of tropical products have increased much less than those of staple products of temperate zones: the cotton price has increased by only 25% from January 2006 to April 2008, the coffee price by 32% in the same period and the cocoa price by 16% from July 2007 to April 2008. One can add the sugar price which has fallen by 37% from January 2006 to September 2007 but only by 13% from January 2006 to February 2008.

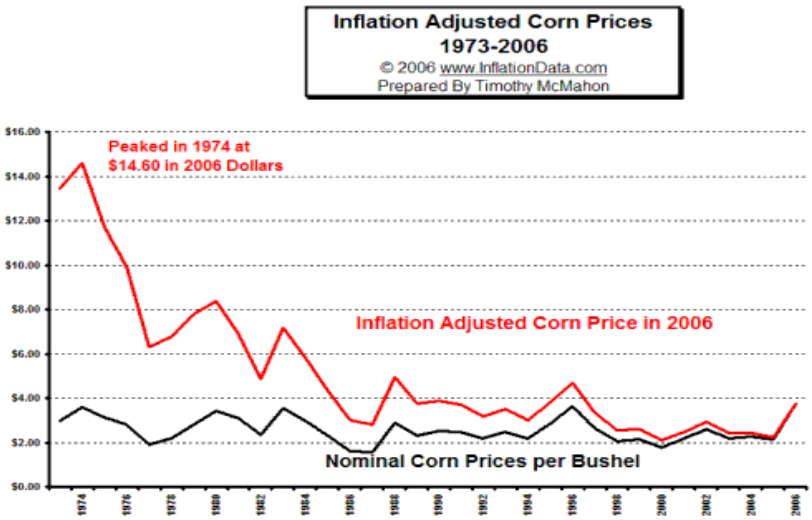
10) However these recent price explosions should be strongly qualified when considering them in the long run, from 1957, and furthermore when expressing them in constant prices, once inflation eliminated. The IMF acknowledges it: "*The current boom has also been more broad based and longer lasting than is usual, and it contrasts noticeably with the 1980s and 1990s, when most commodity prices were on a downward trend. That said, despite the apparent reversal of the downward trend, inflation-adjusted prices of many commodities are still well below the levels seen in the 1960s and 1970s*"[6].

The first graph shows that the current rice price at the end of 2007 was still lower than in 1973, after the first oil shock, and the second graph shows that, in constant dollars of 2006, the corn price was still much lower at the end of 2006 and even in the second week of May 2008 ($10 per bushel) than during its peak of 1974 ($14.60).

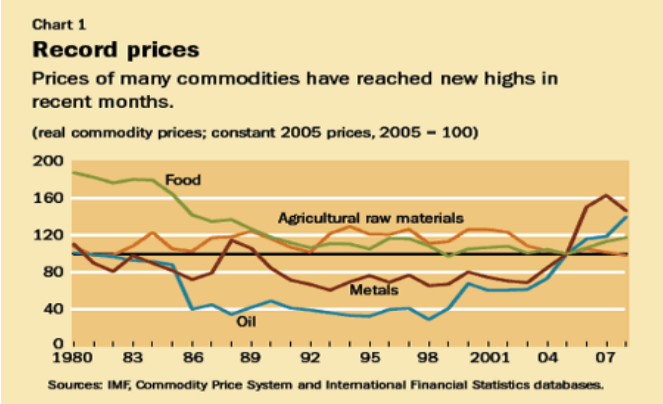
[6] http://www.imf.org/external/pubs/ft/fandd/2008/03/helbling.htm



Source: http://blogs.cgdev.org/globaldevelopment/2008/04/the_global_food_crisis_time_fo_1.php



The following graph shows that this holds also for all commodities – food, agricultural raw materials, metals and oil – although curves starting in 1973 would have shown it better.



Source : http://www.imf.org/external/pubs/ft/fandd/2008/03/helbling.htm#author

III – The fall in grains production and stocks facing an increased demand

According to USDA's estimates of 9 May 2008, global cereals production has fallen from 2. 017 Mt in 2005-06 *[marketing year, from July 2005 to June 2006]* to 1.995 Mt in 2006-07 – that is only by 1.14% – but would rebound at 2.100 Mt in 2007-08[7], i.e. a rise by 5.3%. At the same time global demand has risen from 2.032 Mt in 2005-06 to 2.049 Mt in 2006-07 (+ 0.7%) and to 2.112 Mt expected in 2007-08 (+ 3.2%) – because the volume of global trade has hardly changed: from 253 Mt in 2005-06 to 262 Mt in 2006-07 and 264 Mt expected in 2007-08. But the increase in the past and expected price can be mainly explained, as always, by a drop in global stocks, from 390 Mt in 2005-06 to 334 Mt in 2006-07 and 324 Mt expected for 2007-08, i.e. successive drops of 13% and 6.5%. However projections for 2008-09 expect a production rise at 2.159 Mt, larger than that of demand at 2.148 Mt, which would raise stocks at 334 Mt and explains also the recent sharp fall in wheat prices.

These changes for cereals concern mainly wheat and coarse grains because rice quantities produced and exported have hardly changed.

a) Rice: global production has in fact increased from 418 Mt in 2005-06 to 421 Mt in 2006-07, 427 Mt being expected for 2007-08. Global demand has evolved in the same way – respectively at 416 Mt, 420 Mt and 424 Mt, so that global stocks remain almost stable – respectively at 76 Mt, 76 Mt and 79 Mt –, trade flows falling slightly from 30 Mt in 2005-06 to 31 Mt in 2006-07 and 27 Mt expected in 2007-08. Projections for 2008-09 anticipate a production increase at 432 Mt, larger than that of demand at 428 Mt, hence larger stocks at 83 Mt, which explains the beginning flow back of futures prices.

If the 460,000 tonnes of rice exported in 2006 by Australia have disappeared as a consequence of the 2007 drought, one cannot blame it for a significant responsibility in the rice price hike[8]. It is clearly for rice that financial speculation, export restrictions and hoarding of availabilities have played the most. Most Asian exporting countries have imposed export taxes or embargos, particularly Vietnam, India, Egypt, Pakistan, China, Cambodia.

But the US ethanol boom shares also a key responsibility in the explosion of the global rice price. Indeed the US rice production has decreased by 12% from 2006 to 2007 after a 16% drop in the area sown in rice and moved to corn, the US exports have fallen by 20%, even if they accounted for only 12% of global rice exports in 2006 and 9.6% in 2007, and the US

[7] http://usda.mannlib.cornell.edu/usda/current/wasde/wasde-05-09-2008.pdf
[8] http://in.biz.yahoo.com/080418/137/6stic.html

price of rice has jumped by 22% from 2006 to 2007 and by 35% from November 2007 to March 2008. Indeed Daryll Ray et al. have shown that the US is also price maker for rice: "*Eighty-four percent of the variation in the Thai rice price could be explained by the Texas price and the US rice stocks-to-use ratio, and a ten-percent increase in the US price will result in a 4.7 percent increase in the Thai price. This correlation is compelling evidence that even where the US is not a dominant exporter, its commodity exchanges influence world prices*"[9].

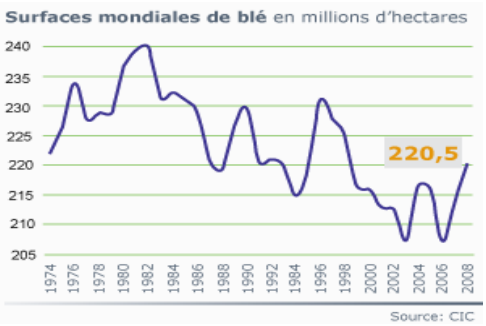
b) Wheat: global production has fallen from 621 Mt in 2005-06 to 593 Mt in 2006-07 and would rise at only 606 Mt in 2007-08. However global demand has also fallen from 624 Mt in 2005-06 to 615 Mt in 2006-07 and would rise at only 620 Mt in 2007-08. But global stocks have dropped from 148 Mt in 2005-06 (after 151 Mt in 2004-05) to 124 Mt in 2006-07, 110 Mt being expected for 2007-08, which has first raised futures prices. And this despite a drop in global wheat trade from 116 Mt in 2005-06 to 111 Mt in 2006-07, 107 Mt being expected in 2007-08. Projections for 2008-09 anticipate a production rise of 8%, at 656 Mt, the increase in demand being limited to 642 Mt, hence larger stocks at 124 Mt, which explains the recent fall in futures prices.

The lower production and exports of wheat are not attributable only to the Australian drought but has hit in 2007 4 over the 5 larger exporters: Australia, Canada, the EU and the US, Argentina being the exception.
1 – In Australia production has fallen from 25 Mt in 2005-06 to 11 Mt in 2006-07, a slight recovery at 13 Mt being expected in 2007-08, exports falling from 16 Mt in 2005-06 to 9 Mt in 2006-07 and to 8 Mt expected in 2007-08. On the other hand projections for the 2008-09 marketing year anticipate a larger production at 24 Mt and exports at 15 Mt.
2 – In Canada production would fall at 20 Mt in 2007-08 after 26 Mt in 2006-07 and 25 Mt in 2005-06, exports falling at 14 Mt in 2007-08 after 20 Mt in 2006-07 and 16 Mt in 2005-06. For 2008-09 25 Mt of production and 17 Mt of exports are anticipated.
3 – In the EU, production has fallen from 132 Mt in 2005-06 to 125 Mt in 2006-07, 119 Mt being expected in 2007-08, exports falling from 16 Mt in 2005-06 to 14 Mt in 2006-07 with 9 Mt expected for 2007-08. For 2008-09 140 Mt of production and 15 Mt of exports are anticipated.
4 – In the US, production has fallen from 57 Mt in 2005-06 to 49 Mt in 2006-07 but would rebound to 56 Mt in 2007-08. Exports have fallen from 27 Mt in 2005-06 to 25 Mt in 2006-07 and would rebound at 35 Mt in 2007-08. US wheat stocks have dropped from 16 Mt in 2005-06 to 12 Mt in 2006-07 and 7 Mt in 2007-08. For 2008-09 65 Mt of production and 27 Mt of exports are anticipated. The lower wheat production of 2007 is due to a 7.9% drop in yield and a 6.6% drop in the harvested area because the sown area has remained stable from 2005-06 to 2006-07 and has risen by 5.4% in 2007-08.

Let us keep in mind that the US are price makers for global 'grains' trade, notably for cereals and particularly wheat and corn of which it is the largest exporter, since the other exporters base their own prices on the US FOB prices.

The following chart shows also the large drop in the global wheat area from 1981.

[9] http://agpolicy.org/blueprint/APAC%20Report%208-20-03%20WITH%20COVER.pdf



Source: http://www.easybourse.com/Website/article/6118-un-doublement-des-prix-des-cereales-en-8-mois.php

c) Corn: contrary to wheat, global corn production has increased from 697 Mt in 2005-06 to 707 Mt in 2006-07 and would jump to 780 Mt in 2007-08. Global demand would evolve accordingly from 704 Mt in 2005-06 to 726 Mt in 2006-07 and to 776 Mt in 2007-08. Global stocks have fallen from 125 Mt in 2005-06 (after 151 Mt in 2004-05) to 105 Mt in 2006-07, 110 Mt being expected for 2007-08. Global exports have risen from 81 Mt in 2005-06 to 93 Mt in 2006-07, 93 Mt being expected in 2007-08. For 2008-09 778 Mt of production and 92 Mt of exports are anticipated, with stocks falling at 99 Mt, fostering higher futures prices.

These developments in the global corn market are essentially dependent on the development of the US corn market where ethanol production from corn has skyrocketed (see in IV-B-1).

However, contrary to what the media can tell, the explosion if the production of corn ethanol has not led to lower US exports which have stabilized at 54 Mt in 2006-07 as in 2005-06 and would jump at 64 Mt in 2007-08 before returning to the 53 Mt anticipated for 2008-09. Let us remember that the US accounts for about 2/3 of global corn exports: 67% in 2005-06, 58% in 2006-07 and 67% in 2007-08. Argentina's exports, which rank second, have increased from 9 Mt in 2005-06 to 15 Mt in 2006-07 and would reach 17 Mt in 2007-08.

d) Other coarse grains: their global production has slightly fallen from 281 Mt in 2005-06 to 276 Mt in 2006-07 and would rebound to 287 Mt in 2007-08.

e) Oilseeds: according to USDA global production of all oilseeds has remained stable from 2005-06 (391.81 Mt) to 2007-08 (390.80 Mt, estimated in May 2008)[10], even if it would fall by 4.2% in relation to the record 408 Mt of 2006-07, so that global stocks would fall by (only) 11% over two years.

Yet global vegetable oil production has increased by 8.7% from 2005-06 (118.3 Mt) to 2007-08 (128.6 Mt), and even by 5.2% in relation to the 122.2 Mt of 2006-07, and global stocks have only fallen by 12.2% over two years and of 3.1% over the last year.

According to FAO, "*Production of soybean, the world's leading oilcrop, is estimated to decline by 6 percent. Moreover, global sunflower seed output is expected to drop by 10 percent… The two main factors behind the anticipated drop in total output are first, increased competition from grains, notably in the United States but also in China and CIS countries, which has interrupted the steady expansion in world oilseed area. Second, unfavourable weather conditions have affected oilseed production in several key growing*

[10] http://www.fas.usda.gov/oilseeds/circular/2008/May/oilseeds.pdf

areas or countries, including the European Union, CIS, Australia, Canada, China, Turkey and the United States"[11].

And FAO specifies: "*A key factor behind the extraordinary price rise is that oilcrop markets have come under the direct influence of developments in the related feed grain market. With maize and soybeans both facing rising demand in the feed as well as the energy market, and thus increasingly competing for land, the unprecedented surge in international maize prices has spilled over to the oilseeds and meal market and in particular the soybean complex. Furthermore, steadily growing biodiesel requirements led to increased demand for vegetable oils, notably soybean, rapeseed and palm oil. This trend, combined with a constant rise in the consumption of vegetable oil as food and weak growth of total oil production in 2006/07, has led to a gradual tightening in global supplies, thus explaining the recent surge in vegetable oil prices*".

Indeed the main reason for soaring vegetable oils prices is not so much linked, as for corn, to their increased use for biofuels, in this case for biodiesel (rapeseed oil, soybean oil or palm oil), as to a sharp drop in US oilseed production in 2007 (-16.6 Mt) and to a smaller one in China (-4.5 Mt). In both cases those reductions result from a shift of the sown area from soybean to corn for ethanol, which has forced China to increase by 5 Mt its imports of oilseeds and by 1.5 Mt its imports of vegetable oil in 2007-08, because its domestic consumption of vegetable oil has only increased by 1.5 Mt in 2006-07 and by 1.4 Mt in 2007-08. However the increase in the EU use of rapeseed oil for biodiesel has also played a significant role.

f) To conclude this section on the role of supply and demand in the explosion of world agricultural prices, let us quote a recent World Bank note: "*Other developments, such as droughts in Australia and poor crops in the E.U. and Ukraine in 2006 and 2007, were largely offset by good crops and increased exports in other countries and would not, on their own, have had a significant impact on prices. Only a relatively small share of the increase in food production prices (around 15%) is due directly to higher energy and fertilizer costs*"[12].

IV – The responsibility of the main countries in the explosion of world agricultural prices

Western media hold China and India as largely responsible for that explosion because of the rapid surge in their food consumption, particularly of animal products, linked to their large per capita GDP growth rates. Actually the US and EU bear almost all the responsibility. But we will wonder also to what extent Brazil might bear some responsibility. What is fundamental to focus on, in the context of the food prices explosion, is the reality of the food trade balances much more than of the agricultural trade balances.

For example the daily French newspaper Les Echos wrote the 15 April 2008: "*The new phenomenon comes above all from consumption habits which are changing at full speed in emerging countries. The two giants that are China and India have become, with their higher incomes, consumers of meat and cereals*"[13].

[11] http://www.fao.org/docrep/010/ah876e/ah876e06.htm
[12] http://siteresources.worldbank.org/NEWS/Resources/risingfoodprices_backgroundnote_apr08.pdf
[13] http://www.lesechos.fr/info/agro/4715042.htm

The French weekly magazine Le Nouvel Observateur of 17-23 April 2008 puts in the first place of seven identified causes "*the modification of food behaviours of emerging countries, particularly China and India*" and adds "*From being exporters, India and China have changed to an importing status*".

FAO's General Director Jacques Diouf declared, in the Africa-India forum of 8 April 2008, after meeting India's Farm Minister Sharad Pawar: "*This is due to higher demand from countries like India [and] China, where GDP grows at 8% to 10% and the increase in income is going to food*"[14].

For Randy Olson, manager of the Iowa's Biodiesel Board, "*The reasons for higher soybean oil include increased demand from "a growing middle class in China, India" and elsewhere*"[15].

All the same, to the question "*Why are the prices of food products increasing so much?*" Nicolas Bricas, researcher at CIRAD, answers: "*Consumption habits are undergoing massive changes in China or India, where the purchasing power tends to increase. Result: demand is exploding. Populations want to buy more and ask for a better diet. They are eating more meat. For their cattle, ranchers need to grow more forage crops. All this is stirring up the surge in all food prices. At the international level, agricultural tariffs have also exploded as the consequence of their deregulation*"[16].

In Le Monde of 22 April 2008, to the question "*Is the arrival of two new ogres on the international market (China and India) the true main cause of this explosion?*" Philippe Chalmin answers without beating about the bush: "*Yes*"[17].

Philippe Lemaître echoes him in the same edition of Le Monde: "*By lack of infrastructures, a country like India is loosing about 30 % of its harvests and is becoming again a net importer of cereals*"[18].

The truth is quite different as these two countries keep a food trade surplus and remain net exporters of cereals, even if they have become large importers of oilseeds, particularly China which ranks second (with 28 Mt of net imports of oilseeds in 2006-07 plus 8.5 Mt of vegetable oil)[19]. But we forget that the EU-27 not only remains the first importer of oilseeds (17 Mt of seeds plus 27 Mt of oilseeds meals and 8.2 Mt of vegetable oil in 2006-07) but that, besides, its food trade balance has remained constantly in deficit (even without fish) and that it has been the third net importer of cereals in 2007-08, with 12.4 Mt, after Japan and Mexico but before South Korea and Egypt. As for the US, it is the main responsible of the agricultural prices explosion, present and expected, through its foolish programme to develop corn ethanol.

[14] http://www.nationalpost.com/news/world/story.html?id=433899
[15] http://www.desmoinesregister.com/apps/pbcs.dll/article?AID=/20080330/BUSINESS/803300315/-1/NEWS04
[16] http://www.lexpansion.com/economie/actualite-economique/la-liberalisation-accroit-la-speculation-sur-les-denrees-alimentaires_150696.html
[17] http://www.lemonde.fr/archives/article/2008/04/22/philippe-chalmin-le-defi-majeur-de-la-planete-au-xxie-siecle-sera-alimentaire_1036889_0.html
[18] http://www.lemonde.fr/opinions/article/2008/04/22/la-revanche-de-l-agriculture-par-frederic-lemaitre_1036895_3232.html#ens_id=1031034
[19] http://www.fas.usda.gov/oilseeds/circular/Current.asp

President Lula from Brazil is also mistaken when he states the 18 April 2008 at FAO: "*Don't tell me, for God's sake, that food is expensive because of biofuel. It is expensive because the world is not prepared to see million of Chinese, Indians, Africans, Brazilians and Latino-Americans eating three times a day*"[20]. We will come back on this issue in sections B (US and EU) and C (Brazil).

A – Surpluses or deficits of agricultural and food trade depend on the included products

The responsibility of countries in the explosion of world agricultural and food prices results largely of their recent net export or net import trade balances of these products. Now data on agricultural and food trade balances of countries are contradictory according to sources because they do not include the same products. Which illustrates the saying that one should mistrust statistics because they are all wrong as long as their constituents are not specified clearly. We will illustrate it on four countries: China, India, the US and EU.

The main sources for such data are: WTO, World Trade Atlas, OECD, FAO, national data and finally the UN trade data base Comtrade, which allows to build our own data to compare the 4 countries with the same list of products.

1) The list of products included in agricultural and food trade differ between sources

a) The WTO has two definitions of agricultural products: the definition of the Agreement on Agriculture (AoA, Annex 1) excludes fishing products, what we can admit, but includes manufactured tobacco (cigarettes, cigars) and not only raw tobacco, which is questionable as it implies necessarily an industrial process. However the WTO's agricultural trade statistics incorporate wood, wood pulp, synthetic rubber and synthetic textile fibres[21]. On the other hand, food statistics include raw tobacco. How could WTO Members reform the AoA, stumbling block of the Doha Round negotiations, if already the WTO agricultural and food statistics are mixing up everything?

b) The World Trade Atlas: we have not been able to exploit fully this source as its access is not free and we have got only agricultural trade data on China kindly transmitted by USDA but we have found contradictions on its fish trade data.

c) OECD is only interesting to identify trade between OECD Members and some third countries (India is not included). Furthermore its agricultural trade data are limited to two sets of products: "food and live animals" and "beverages and tobacco"[22].

d) FAO has the most restrictive definition of food products as it does not include fish products, which is strange for an institution in charge of food and even of fisheries. FAO does not include either feedstuffs in food products (see discussion below). As furthermore its trade data do not go beyond 2005, we will not use them.

f) Comtrade, the United Nations' trade data base is the most user-friendly and detailed source and allow to use several classifications (SITC, HS, BEC) to build the same list of products for all countries to be included in their agricultural trade and food trade. We will use the list of

[20] http://www.lemonde.fr/ameriques/article/2008/04/18/le-president-lula-defend-avec-vigueur-les-biocarburants_1035640_3222.html
[21] http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E
[22] http://stats.oecd.org/wbos/Index.aspx?usercontext=sourceoecd

agricultural products defined in Annex 1 of the AoA except manufactured tobacco (cigarettes and cigars).

We have mainly used the classification of the "Standard International Trade Classification" (SITC), in its 3rd revision. The codes of products selected for agricultural trade are: 0 (food products and live animals, excluding 03 for fish products), 11 (beverages), 121 (raw tobacco), 22 (oilseeds and oleaginous fruits), 231 (natural rubber), 261 (silk), 263 (cotton), 264 (jute), 265 (vegetable textile fibres), 268 (wool and other animal hair), 29 (crude animal and vegetable materials), 4 (animal and vegetable oils, fats and waxes), 551 (essential oils). For food products we have retained codes 0, 11, 22 and 4.

However, as the AoA refers to the Harmonized System (HS) classification that the European Commission is also using together with the SITC classification, we have also used it to check the possible discrepancies in results which are sometimes significant, particularly for fish products. We have used the HS 2002 but its data are only available from 2002. The HS2002 agricultural codes are: 01, 02, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 290543, 290544, 3301, 3501, 3502, 3503, 3504, 3505, 380910, 382360, 4101, 4102, 4103, 4301, 5001, 5002, 5003, 5101, 5102, 5103, 5201, 5202, 5203, 5301, 5302.

2) The issues raised by the list of products to be selected

It is not that easy to establish this list, not only because it differs according to the mentioned sources but also because it raises true questions, particularly for fish products, natural textile fibres, feedstuffs and live animals.

a) Fish products: it is obvious that they should be included in food trade but many arguments plead to include them as well in agricultural trade: 1) they are animal proteins which can largely be substituted for meat; 2) in 2004 34.2% of global fish production were going to animal feed, which is of course included in agricultural trade; 3) conversely an increasing share of animal feed is consumed by aquaculture; 4) aquaculture, often associated with agriculture, represents an increasing share of fish products – 31% at the world level in 2003, 70% of which are produced by China –, even more in China where it accounts for 66% of fish products production in 2005 (32.4 Mt over 49.5 Mt); 5) agriculture Ministers are generally in charge of fisheries. Nevertheless we will include them only in food trade.

b) Natural textile fibres: the issue of their inclusion in agricultural products comes up mainly for China where such an inclusion does not seem logical. Indeed, having become the world textile workshop, its massive imports of cotton can be viewed as purchases of raw materials by an industry for reexport, so that their inclusion in agricultural trade leads to a trade deficit that would not materialize otherwise.

c) Feedstuffs: they are included in code 08 (of the SITC Rev.3 classification): oilcakes (0813), residues of cereals, of which bran (0812) and other vegetal products (0815, 0819) and animal products (0814), hay (0811). But the full grains (of cereals, oilseeds and pulses) are excluded. If it is logical to include them in agricultural products, it seems illogical at first sight to include them in food products, which is the FAO position. Yet, as grains of cereals, oilseeds and pulses are included in food products (code 04) as are vegetable oils (42), to exclude oilcakes and cereals residues from food products confers to countries importing their feedstuffs in this last form a food trade surplus much larger than those importing them under the form of grains (of cereals, oilseeds or pulses). Thus excluding feedstuffs from food trade reinforces the EU food trade balance, which is mainly importing oilcakes, relatively to

China's food trade balance as it imports only grains and vegetable oil, and to India which imports only vegetable oil. Therefore we will maintain them in food trade.

d) Live animals: it seems logical at first sight to exclude them from food trade since it is the meat which is consumed. However, on second thoughts we should not exclude them as they will eventually produce meat after slaughter in the importing country or after raising the imported breeding stock.

B – China and India are not responsible for the recent explosion in world agricultural prices

1) China

a) Chinese food consumption

It is argued that, with its present growth rate, China will reach in 2031 the present US living standard. If the expected 1.460 billion of Chinese are then consuming 800 kg of cereals per capita as the US is doing today, they would consumed themselves alone 58% of the present global cereals production.

Per capita meat consumption has increased by 4.5% per year from 2001 to 2006[23], and was of 36 kg on average in 2003, with a large gap in 2000 between 52.1 kg for city dwellers and 28.9 kg for country people. That of eggs was in 2003 of 12 kg and that of fish of 15.5 kg, the latter increasing by 2.5% per year. That of dairy (in milk equivalent) was of 11.6 kg[24] in 2003 and 20 kg in 2006 (a yearly increase of 10%), against 78 kg as the world average in 2003[25].

It is clear that such a surge in the consumption of animal products has fostered soaring net imports of soybeans – from 16 Mt in 2003-04 to 34 Mt expected in 2007-08 –, even though the cereals production has allowed significant net exports (see below).

According to FAO, the share of animal products in per capita caloric consumption is today (average 2003-05) of 609 kcal in China against 1,063 kcal in the US, 1,103 kcal in Germany and 1,255 kcal in France, but it is only of 483 kcal in South Korea and of 585 kcal in Japan. This does not prevent Japan to have in 2005 the best life expectancy at birth in the world (82.1 years), that of South Korea (78.5 years) being itself higher than that of the US (77.8 years), France being at 80.3 years[26]. On the other hand the weight of fish in animal calories is much larger in Japan (172 kcal) and in South Korea (89 kcal) than that in China (37 kcal).

As for the per capita consumption of vegetable oil, it is still only of 18.9 kg in 2004 in China against 50 kg in the US and EU and 11.5 kg in India[27]. Besides, let us not forget that there were still 154 million Chinese suffering from chronical under-nutrition in 2002-04.

b) China's agricultural trade balance: contradictions between various sources

Data on China's agricultural trade are contradictory according to available sources as they do not include the same products.

[23] http://www.sow.vu.nl/pdf/china_prospects_challenges.pdf
[24] http://www1.cei.gov.cn/ce/doc/cend/200608293176.htm
[25] http://www.uoguelph.ca/research/news/articles/2004/Feb/milk_consumption_and_the_canadian_mosaic.shtml
[26] http://miranda.sourceoecd.org/vl=1060371/cl=15/nw=1/rpsv/factbook/110101.htm
[27] http://www.rea.co.uk/market/#consumption

i) For WTO China had an 'agricultural' trade deficit of $16.5 billion in 2005 and of $19.1 billion in 2006 (with imports of $51.7 billion), a huge deficit due to the incorporation of non agricultural products (wood, wood pulp, synthetic textile fibres, synthetic rubber). On the other hand data on food trade, which oddly enough take tobacco into account, are close to data from other sources, with a trade surplus close to $5 billion in 2006.

Table 3 – China's agricultural and food trade from 2002 to 2006 according to WTO

$ billion	2002	2003	2004	2005	2006
Exports of agricultural products	18.796	22.158	24.121	28.711	32.543
Imports "	21.848	30.482	42.279	45.189	51.653
Balance "	-3.052	-8.324	-18.158	-16.478	-19.110
Exports of food products	16.164	19.242	20.815	24.635	27.864
Imports "	9.891	14.970	21.121	21.541	22.917
Balance "	6.273	4.272	-0.306	3.094	4.947

Source: WTO trade data (http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E).

ii) The World Trade Atlas presents data largely lower than those of WTO for agricultural imports but closer data for food trade.

Table 4 – China's agricultural and food trade according to the World Trade Atlas: 1995-2007

$ billion	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Agricultural trade including fish products but not wood and other non agricultural products													
Exports	13.3	13.2	14.3	13.4	13.2	15.2	17.5	13.0	20.6	22.5	26.5	29.9	35.7
Imports	11.2	9.8	9.0	7.7	7.2	10.0	10.5	10.9	17.6	26.2	26.3	30.6	39.3
Balance	2.1	3.4	5.3	5.7	6.0	5.2	7.0	2.1	3.0	-3.7	0.2	-0.7	-3.6
Food trade including fish products													
Exports	11.5	11.6	12.5	11.6	11.5	13.4	14.0	15.9	19.0	20.6	24.5	28.2	33.3
Imports	9.0	7.8	7.0	6.7	6.7	8.9	9.2	9.8	14.7	20.8	21.3	22.7	32.1
Balance	1.5	3.8	5.5	4.9	4.8	4.5	4.8	6.1	4.3	-0.2	3.2	5.5	1.2

Source: World Trade Atlas

iii) For OECD, China has kept a $4-5 billion surplus in its agricultural trade (with fish products) from 1995 to 2003 but has had a deficit in 2004 (-$5.2 billion) and 2005 (-$1.5 billion)[28].

Table 5 – China's agricultural trade from 1995 to 2005 according to OECD

$ billion	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Exports	14.36	14.25	14.96	13.85	13.54	15.62	15.97	18.02	21.24	23.09	27.18
Imports	12.15	10.84	9.99	8.37	8.33	11.41	11.98	12.59	19.12	28.24	28.65
Balance	2.21	3.41	4.98	5.47	5.21	4.21	4.00	5.43	2.12	-5.15	-1.46

Source: http://dx.doi.org/10.1787/731002823370

iv) USDA, based on the World Trade Atlas data which include also fish products but not wood, finds a high surplus from 2000 to 2006 (table 6).

Table 6 – China's agricultural trade from 2000 to 2006 according to USDA

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	13.143	13.764	15.700	18.670	20.230	23.928	27.289
Imports	6.099	6.151	7.260	9.450	13.920	13.541	19.936
Balance	7.044	7.613	8.440	9.220	6.310	10.387	7.353

Source: http://www.ers.usda.gov/data/china/NationalForm.aspx

[28] http://www.oecd.org/dataoecd/11/7/40354157.pdf

The data dissociate exports and imports in 3 categories – food and live animals, oilseeds and fats, tobacco and beverages – that we have put together. However the USDA's staff in charge of China is not so sure of the reliability of these numbers.

c) Reconstruction of China's agricultural trade

i) Comtrade data show that the balance of agricultural trade (without fish products) has strongly deteriorated since 2002, with a deficit having exceeded $10 billion in 2004 and 2006 in the SITC classification (table 7).

Tableau 7 – China's agricultural trade from 2000 to 2006 according to SITC Rev. 3

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	12.093	11.923	17.994	15.907	16.370	19.556	21.557
Imports	10.853	11.277	13.514	18.252	27.177	27.659	31.854
Balance	1.240	0.646	4.480	-2.345	-10.807	-8.103	-10.297

Source: COMTRADE, SITC Rev.3, codes 0 (moins 03), 11, 121, 21, 22, 231, 261, 263, 264, 265, 268, 29, 4,551

ii) However more than half of the deficit is attributable to the exclusion of fish products (tables 8 and 9). Now their non inclusion in agricultural trade would be highly illogical for China as 66% of its fish products come from aquaculture, largely practiced by farmers.

Table 8 – China's trade in fish products from 2000 à 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	3.652	3.996	4.480	5.237	6.631	7.511	8.946
Imports	1.210	1.319	1.558	1.861	2.342	2.875	3.157
Balance	2.442	2.677	2.922	3.376	4.289	4.636	5.789

Source: COMTRADE SITC Rev.3, code 03

Table 9 – China's agricultural trade with fish products

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	15.745	15.919	17.994	21.144	23.001	27.067	30.503
Imports	12.063	12.596	13.282	20.113	29.519	30.534	35.011
Balance	3.682	3.323	4.712	1.031	-6.518	-3.467	-4.508

Source: COMTRADE, SITC Rev.3, codes 0, 11, 121, 21, 22, 231, 261, 263, 264, 265, 268, 29, 4, 551

iii) Another major issue is to know if it is logical to include the trade in natural textile fibres in China's agricultural trade because, having become the world textile workshop, its massive cotton imports represent 65% of its own production in 2005-06 against 36% at the global level and are similar to purchases of raw materials for a re-export industry.

Table 10 shows that China's import of natural textile fibres (mainly cotton) have jumped from 2003 so that its trade deficit is close to $6 billion in 2006.

Table 10 – China's trade in natural textile fibres from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	1.031	0.687	0.788	0.775	0.708	0.823	0.893
Imports	1.392	1.347	1.399	2.395	4.784	4.946	6.728
Balance	-0.361	-0.660	-0.611	-1.620	-4.076	-4.123	-5.835

Source: COMTRADE, SITC Rev.3, codes 261, 263, 264, 265, 268

Table 11 shows that, excluding trade in natural textile fibres, China's agricultural trade with fish products have generated a surplus, except in 2004. The comparison between tables 9 and 11 for 2006 shows that we turn from a $4.5 billion deficit to a $1.3 billion surplus.

Table 11 – China's agricultural trade without natural textile fibres from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	14.714	15.232	17.206	20.369	22.293	26.244	29.610
Imports	10.671	11.249	11.883	17.718	24735	25.588	28.283
Balance	4.043	3.983	5.323	2.651	-2.442	656	1.327

Source: COMTRADE, SITC Rev.3, codes 0, 11, 121, 21, 22, 231,29, 4,551

For meaningful international comparisons of agricultural trade, it seems thus more logical to exclude the trade in natural textile fibres for China. In either cases this would not modify its food trade which is the only one to be considered in the recent context of the agricultural prices explosion of food products and of hunger riots.

d) Except in 2004, China's food trade has generated a surplus and that of 2006 ($4.947 billion) was even higher than that of 2003, which is clearly attributable to a larger surplus in the trade of food products without which the balance would have been negative.

Table 12 – China's food trade from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	13.560	14.222	16.165	19.241	20.815	24.635	27.864
Imports	9.042	9.367	9.891	14.970	21.121	21.540	22.917
Balance	4.518	4.855	6.274	4.271	-0.306	3.095	4.947

Source: COMTRADE SITC Rev.3, codes 0, 11, 22, 4

e) China has kept a surplus in its cereals trade from 2000 to 2006 (table 13) except in 2004 because of massive wheat imports (table 15), compensated to a large extent by exports of corn and rice.

Table 13 – China's trade in cereals from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	1.817	1.237	1.877	2.870	1.094	1.842	1.542
Imports	0.613	0.655	0.532	0.500	2.279	1.468	0.909
Balance	1.204	0.582	1.345	2.370	-1.185	0.374	0.633

Source: COMTRADE, SITC Rev.3, code 04

According to Chinese data, net exports of cereals would have been of 7.8 Mt in the first 11 months of 2007: 4.9 Mt of corn, 2.6 Mt of wheat and 746,000 t of paddy rice[29]. According to USDA however, they would have been of (by marketing year) 2.4 Mt in 2005-06, 7.5 Mt in 2006-07 and 2.7 Mt in 2007-08[30]. And FAO estimates that China will increase its net cereals exports in 2007-08[31].

[29] http://english.people.com.cn/90001/90778/90857/90860/6335141.html
[30] http://usda.mannlib.cornell.edu/usda/current/wasde/wasde-05-09-2008.pdf
[31] http://economictimes.indiatimes.com/articleshow/2603649.cms

i) Wheat: after very large imports in 2004 and 2005, Chine has had net wheat exports in 2006. For USDA they have been of 2.4 Mt in 2006-07, would be of 2.5 Mt in 2007-08 and of 2 Mt in 2008-09.

Table 14 – China's wheat trade from 2000 to 2006

	2000	2001	2002	2003	2004	2005	2006
Exports in 1000 t	2.5	455	688	2,237	784	260	1,114
Imports "	876	690	605	424	7,233	3,510	584
Balance "	-873	-235	83	1,813	-6,449	-3,250	530
Exports in M$	0.2	47	70	265	112	37	161
Imports "	147	121	103	77	1.640	762	108
Balance "	-145	-74	-33	188	-1.528	-725	53

Source: COMTRADE, SITC Rev.3, code 041

Wheat trade has generated all the more a surplus if we add net exports of wheat flour.

Table 15 – China's trade in wheat flour from 2002 to 2007

	2002	2003	2004	2005	2006	2007
Exports in 1000 t	289	275	304	342	395	736
Imports "	27	23	25	28	29	17
Balance "	262	252	279	314	366	719
Exports in M$	62	60	77	86	97	211
Imports "	10	9	9	11	12	8
Balance "	52	51	68	75	85	203

Source: COMTRADE, HS 2002, code 1101

ii) Rice: China has remained a net exporter of rice since 2000. For USDA they have been of 0.85 Mt in 2006-07, 0.7 Mt in 2007-08 and 0.8 Mt are projected for 2008-09.

Table 16 – China's rice trade from 2000 to 2006

	2000	2001	2002	2003	2004	2005	2006
Exports in 1000 t	2,953	1,859	1,978	2,601	896	672	1,237
Imports "	239	269	236	257	756	514	719
Balance "	2,714	590	1,742	2,344	140	158	518
Exports in M$	561	329	380	495	233	225	409
Imports "	112	98	80	97	252	196	288
Balance "	449	231	300	398	19	29	121

Source: COMTRADE, SITC Rev.3, code 042

iii) Corn: China has been the second world exporter of corn up to 2003-04 after what Brazil has replaced it. For USDA its net exports have been of 5.25 Mt in 2006-07 but would fall to 0.4 Mt in 2007-08 as in 2008-09.

Table 17 – China's corn trade from 2000 to 2006

	2000	2001	2002	2003	2004	2005	2006
Exports in 1000 t	10,466	5,998	11,674	16,399	2,318	8,610	3,070
Imports "	0.3	36	6	0.1	2	4	65
Balance "	10,466	5,962	11,668	16,399	2,316	8,606	3,005
Exports in M$	1,052	626	1,167	1,767	324	1,097	412
Imports "	0,4	5	2	0,4	0,8	1	12
Balance "	1,052	621	1,165	1,767	323	1,096	400

Source: COMTRADE, SITC Rev.3, code 044

iv) Other coarse grains: Chine is a net importer of barley (2.1 Mt for 406 M$ in 2006) but exports other coarse grains and cereals preparations. Without taking the last ones into account for which there are no future estimates, USDA estimates that net trade of all coarse grains (including corn) have been of 4.25 Mt in 2006-07, but that there would be net imports of 0.48 Mt in 20007-08 and of 0.78 Mt in 2008-09. However, taking into account the net wheat and rice exports, China would remain a net exporter of cereals.

Daryll Ray has also found that "*China was a net meat exporter for the last 7 years*"[32] and confirmed that "*to date, the increased production of meats by China has had little direct impact on world corn trade besides a slight reduction in Chinese net export levels*"[33].

v) Partial conclusion: as China has remained a net exporter of cereals, it is not responsible for the explosion in their world prices. Which is confirmed by Daryll Ray: "*The data do not support the often-stated implication that the sharp increase in grain prices is attributable to the Chinese diet change*". This is confirmed above all by a Chinese researcher: "*Not only China is not a threat at the source of the explosion of world cereals prices, to the contrary it has been an important stabilizing factor. With the striking and startling contrast of these last years between the world where total production and reserves of cereals have fallen and China whose cereals production has increased continuously and which has registered a balance between supply and demand, and where cereals reserves have increased as have done also abundant supplies on the market so that prices have increased in a slight and structural way. From 2004 to 2007 in China, national cereals production has reached respectively: 469.469 million tonnes, 484.022 million tonnes, 497.499 million tonnes and 501.500 million tonnes, that is an increase during four consecutive years*"[34].

f) China's huge deficit in oilseeds products

Analyzing the explosion in world agricultural prices, the IMF wrote in March 2008: "*In 2006, China accounted for one-fifth of global consumption of wheat, corn, rice, and soybeans. In fact, China is now the world's largest importer of soybeans in the world, consuming about 40 percent of the world's soybean exports*"[35].

We have already shown that China has remained a net cereals exporter. But IMF statement on oilseeds is also erroneous: China is only the second importer of oilseeds products because, if it leads in 2006-07 for soybean grains (28.7 Mt against 15.3 Mt for the EU-27) and soybean oil (2.4 Mt against 1.4 Mt for the EU), it does not import any soybean meal when the EU has imported 22.1 Mt. Therefore we have a total tonnage of 31.1 Mt of soybean products for China against 38.8 Mt for the EU (the gap is even larger once oil and meals are converted into grains equivalent). And this has always been verified in the past, even for the EU-15 as China has got ahead of the EU-15 for imports of soybean grains only since 2002-03.

Table 18 – China's trade in oilseeds products (grains, oils and meals) from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	0.617	0.699	0.789	0.877	0.934	1.097	0.996
Imports	3.814	3.827	4.053	8.260	11.147	11.170	11.629
Balance	-3.197	-3.128	-3.264	-7.383	-10.213	-10.073	-10.633

Source: COMTRADE, SITC Rev.3, codes 0813, 22 et 42

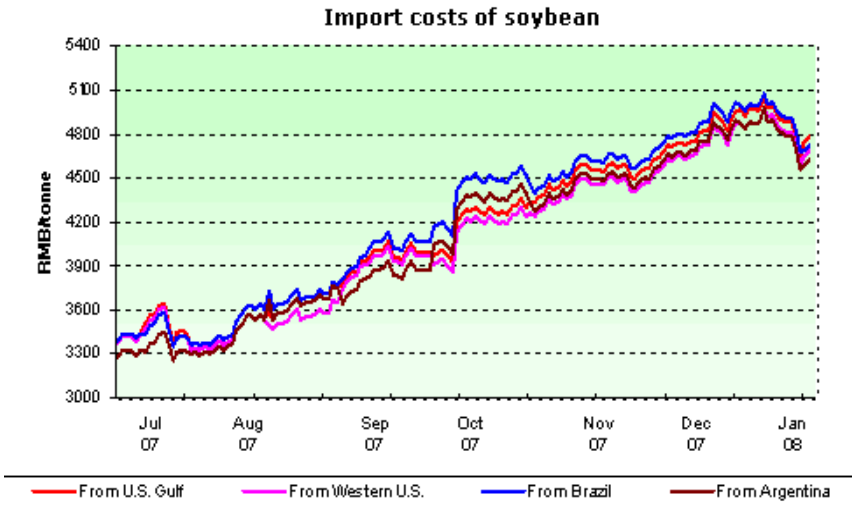
[32] http://www.agpolicy.org/weekcol/407.html
[33] http://www.agpolicy.org/weekcol/408.html
[34] http://french.people.com.cn/Horizon/6356051.html
[35] http://www.imf.org/external/pubs/ft/fandd/2008/03/helbling.htm

Table 19 shows the main net imports of China's oilseeds products from 2000 to 2007.

Table 19 – China's net imports of oilseeds products from 2003 to 2007

Million tonnes	2003	2004	2005	2006	2007
Soybean grains	20.476	19.843	26.194	27.905	30.388
Soybean oil	1.874	2.496	1.631	1.425	2.756
Rapeseed oil	0.147	0.348	0.147	-0.101	0.353
Paml oil	3.326	3.851	4.319	5.141	5.097
All vegetable oils	5.437	6.695	6.097	6.465	8.206

Source : http://www.usdachina.org/info_details1.asp?id=1855



Source : http://www.efeedlink.com/showdetail/?id=%7B00B78023-D85D-43CB-AAD2-2D3BFC64D0A8%7D

Despite that imports of oilseeds grains would rise by 5 Mt in 2007-08 and those of vegetable oils by 1.5 Mt[36], one cannot conclude of their responsibility in the explosion of oilseeds world prices. As seen page 11, this can be explained mainly by the sharp drop in the US production of soybean (-16.6 Mt), much larger than that in China (-4.5 Mt). Indeed, before halving its ethanol production in 2007, China had transferred to corn 10% of the area sown in soybean (1.3 million ha), which, combined to climatic vagaries[37], has reduced soybean production by 4.5 Mt in 2007. This can be explained also a larger increase in the EU imports of vegetable oil (2.2 Mt) than in China imports (1.4 Mt), because China domestic consumption of soybean oil has only increased by 1 Mt, and that of soybean grains has fallen by 0.2 Mt.

g) China and biofuels

To what extent has China contributed to the expansion of biofuels which have kept going the explosion of the world prices of cereals and oilseeds?

The answer is mixed depending on the period. If China has produced 3.8 billion litres of ethanol in 2006 (3rd largest producer), 90% of which from corn, it has forbidden in June 2007 any new production from corn because the price of pork had jumped by 42% in 2006. Its production has then been halved, to 1.8 billion litres, in 2007. As China has kept exporting corn, one cannot charge it with any responsibility in the explosion of cereals world prices. And, as it has produced only 50,000 tonnes of biodiesel in 2006 against an objective of 2 Mt in 2010, this has not impacted on vegetable oils world prices.

[36] http://www.fas.usda.gov/oilseeds/circular/2008/May/oilseeds.pdf
[37] www.usda.gov/oce/weather/pubs/Annual/CropProduction.pdf

h) Are China's restrictions to cereals exports responsible for the explosion of their world prices?

As China's significant net exports of cereals in 2007 have also contributed to increase their domestic price, this has motivated the government to suppress in 2007 the reduction in the export tax on cereals and to impose export quotas from January 1, 2008.

But China has neither been the first nor the last country to take restrictive measures or even embargos on exports of their agricultural products: Vietnam, India, Egypt, Cambodia, Indonesia have done the same for rice. Even Thailand, the first rice exporter, has decided to sell rice 40% cheaper on its domestic market than for exports, which is the same as taxing exports[38]. Argentina, Ukraine and Russia have also restricted wheat exports. And this pratice has also concerned other products and other countries.

Although such export restrictions are forbidden by the WTO for developed countries – they are tolerated for DCs on a temporary basis –, the EU itself had heavily taxed its wheat exports from end 1995 to July 1996. Yet, according to the daily Les Echos of 18 April 2008, "*Despite the IMF itself has admitted the cogency of States to protect their domestic market, the EU trade Commissioner, Peter Mandelson, is sticking to his guns: « Taxing exports, quotas and interdictions do not serve economy or development », he has hammered out yesterday before the European Parliament, denouncing « a return to mercantile policies of the past » and the risk « of a protectionist spiral and a fall in global agricultural production »*"[39].

Yet every government has the duty to look after the food security of its own citizens first, which should be a right recognized by the WTO, as long as it does not attack the rest of the world through a dumping of its products, dumping that the WTO does not really prohibit as export subsidies are still there and, above all, because it allows the domestic subsidies benefiting also to exported products. On this issue Peter Mandelson pretends to ignore that the EU is the world champion (we come back to it further on).

i) To conclude, an negative impact of China on the recent explosion of world agricultural prices must be discarded.

j) However Chine will face in the long run an increased deficit of its agricultural trade balance

The Chinese vice-Minister of agriculture, Yi Chengjie, has acknowledged the 13 September 2007 that "*the balance between cereals supply and demand is ensured for the time being, but that cereals production is confronted with an ever growing demand, with a growing pressure of a structural imbalance and a constraint due to the reduction of arable lands and with the shortage of fresh water resources. Furthermore, we should not forget the effects which will come from climate change and natural disasters which are occurring frequently*"[40].

According to Huang Jikun, Director of the Centre of agricultural policy of the Academy of sciences, "*In 2015, China will have to import corn to face 15% of its demand. But wheat and rice exports will then have increased to balance total cereals trade*"[41].

[38] http://alternatives-international.net/article2031.html
[39] http://www.lesechos.fr/info/inter/4716963.htm
[40] http://french.people.com.cn/Economie/6262830.html
[41] http://www.chinadaily.com.cn/bizchina/2007-08/08/content_6016158.htm

In the longer run, one team of Chinese researchers has established a forecast at the horizon 2030, in which they underline that potential yield gains would allow to compensate the expected fall in agricultural area[42], which has been of 300,000 ha per year from 1987 to 2000, and which would reduce the area in annual crops from 125.6 M ha in 2003 to 116.6 M ha in 2030. They underline that the average yields of 2003-2005 have been of 4.2 t/ha for wheat against 7 to 8 t in the EU, of 6.2 t/ha for paddy against 7.6 t in the US and of 5.1 t/ha for corn against 8 to 9 t in the EU and more than 9 t in the US.

The base scenario forecasts that per capita food consumption expenditures at constant prices would increase by 20% over 2003 for low income country people and by 60% for high income city dwellers, which would above all increase the consumption of animal products. That of meat would go on average from 35.9 kg in 2003 to 57.5 kg in 2030, that of eggs from 12 to 19.5 kg, that of milk from 11.6 kg to 38.7 kg and that of fish from 15.5 kg to 27.7 kg.

To cover its needs, the base scenario would require to import 6 Mt of pig meat (10% of consumption), 3 Mt of poultry meat (16% of consumption) and 28.9 Mt of milk equivalent in dairy produce. China would be self-sufficient in bovine meat and eggs. But, if China would continue to be self-sufficient in wheat and would export 4 Mt of rice, it would have to import a lot of feedstuffs: 22 Mt of corn, 17 Mt of grains equivalent in other caloric feed and 38 Mt of meals equivalent in protein feed (hardly more than the 36 Mt of soybean expected for 2008 however). The other net imports would consist of 9.1 Mt of vegetable oils (hardly more than the present situation) and 3.1 Mt of sugar. But China would be a net exporter of 18 Mt of fruits and vegetables. All in all this would imply a negative agricultural trade balance of $29 billion (in 1997 $), which would be easily compensated by the surplus of other components of its trade balance.

In the scenario with a high progress in research-development, the agricultural trade balance deficit would be reduced by more than 50%, among others because the potential to export fruits and vegetables could rise to 50 Mt. Let us underline that China's agricultural added value has already been increasing by 4.5% a year from 2003 to 2007[43].

China seems to be aware of those challenges to raise production, as agricultural investments have jumped by 31% in 2007 and as it has doubled its agricultural subsidies for 2008, at $79.2 billion, in relation to 2004.

To conclude, this outlook of larger dependance from agricultural imports in the long run has nothing to do with China's responsibility in the recent explosion of world agricultural prices.

2) India

a) India has been a net exporter of agricultural and food products since 1995

i) According to the WTO: as for China, WTO trade data (table 20) are misleading as they include wood and wood pulp in agricultural trade and tobacco in food trade. Nevertheless India has had a growing surplus in either case.

[42] http://www.sow.vu.nl/pdf/china_prospects_challenges.pdf
[43] http://www.adb.org/Documents/Books/ADO/2008/ado2008.pdf

Table 20 – India agricultural and food trade from 2002 to 2006 according to the WTO

$ billion	2002	2003	2004	2005	2006
Exports of agricultural products	7.025	7.935	8.588	10.780	14.412
Imports "	5.069	6.426	6.906	7.357	7.840
Balance "	1.956	1.509	1.682	3.423	6.572
Exports of food products	6.461	7.113	7.781	9.188	11.215
Imports "	3.311	4.080	4.335	4.580	4.760
Balance "	3.150	3.033	3.446	4.608	6.455

Source: WTO trade data (http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E).

ii) According to OECD, India's "agri-food" imports (without specifying the components) have remained in surplus ever since 1995, with a surplus of $5.370 billion in 2005.

Table 21 – India's "agri-food" trade from 1995 to 2006 according to OECD

$ billion	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Exports	6.35	7.13	6.90	6.28	5.90	6.48	6.33	7.02	7.93	8.52	10.77
Imports	2.07	2.20	2.58	3.81	3.98	2.89	3.73	4.06	4.94	5.12	5.40
Balance	4.27	4.94	4.33	2.46	1.92	3.59	2.59	2.97	2.99	3.40	5.37

Source: http://dx.doi.org/10.1787/724373401565

b) The Comtrade data base shows that India's agricultural trade has enjoyed a growing surplus from 2002 and has reached a $4.3 billion ceiling in 2006.

Table 22 – India's agricultural trade from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	4.972	4.997	5.556	6.578	7.132	9.190	11.471
Imports	2.905	3.775	4.087	4.995	5.174	5.455	7.154
Balance	2.067	1.222	1469	1.583	1.958	3.735	4.317

Source: COMTRADE, SITC Rev.3, codes 0 (less 03), 11, 121, 21, 22, 231, 261, 263, 264, 265, 268, 29, 4, 551

c) India has also enjoyed a growing food trade surplus since 1995, exceeding $4.3 billion in 2005 and 2006.

Table 23 – India's food trade from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	5.652	5.620	6.249	6.879	7.505	8.886	10.434
Imports	2.252	2.849	3.302	4.068	4.310	4.562	6.113
Balance	3.400	2.771	2.947	2.811	3.195	4.324	4.321

Source: COMTRADE, SITC Rev.3, codes 0, 11, 22, 4

Even if we take out fish products, the surplus in food trade remains significant ($2.590 billion in 2006).

Table 24 – India's trade in fish products from 2000 to 2006

$ million	2000	2001	2002	2003	2004	2005	2006
Exports	1,402	1,237	1,410	1,307	1,364	1,590	1,756
Imports	7	8	8	11	14	23	25
Balance	1,395	1,225	1,402	1,296	1,350	1,567	1,731

Source: COMTRADE, SITC Rev.3, code 03

As India considers fish products as agricultural products, this increases by as much the agricultural trade surplus. However, as they represent only 40% of the agricultural trade balance in 2006, contrary to China, deleting fish products would not turn it negative.

Table 25 – India's agricultural trade, fish products included, from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	6.374	6.234	6.966	7.885	8.496	10.780	13.227
Imports	2.912	3.783	4.095	5.006	5.188	5.478	7.179
Balance	3.462	5.851	2.871	2.879	3.308	5.302	6.048

Source: COMTRADE, SITC Rev.3, codes 0, 11, 121, 21, 22, 231, 261, 263, 264, 265, 268, 29, 4,551

d) Cereals have weighed the most, before fish products up to 2005, in the agricultural (and food) trade surplus, and the balance has remained positive in 2006 despite huge wheat imports. India exports mainly rice but has also exported wheat from 2001-02 to 2005-06. In 2005-06 it has exported 6.6 Mt of cereals of which 5.1 Mt of rice and 0.6 Mt of wheat, against 8 Mt of cereals in 2004-05 of which 4.8 Mt of rice and 2 Mt of wheat[44].

Table 26 – India's cereals trade in value from 2000 to 2006

$ million	2000	2001	2002	2003	2004	2005	2006
Exports	805	1,041	1,691	1,641	2,071	1,753	1,816
Imports	28	22	22	18	23	31	1,317
Balance	777	1,019	1,669	1,623	2,048	1,722	499

Source: COMTRADE, SITC Rev.3, code 04

i) Rice exports (table 27) are net because there is no import. According to USDA India has exported 5.5 Mt of rice in 2006-07 and it estimates they would be of 2.5 Mt in 2007-08 and 2 Mt in 2008-09. However Reuters agency specifies that rice exports have been of 5.5 Mt for the marketing year 2007-08 against 3.8 Mt in 2006-07[45].

Table 27 – India's rice trade from 2000 to 2006

1000 tonnes and $ million	2000	2001	2002	2003	2004	2005	2006
Exports in 1000 t	1,534	2,209	5,057	3,412	4,797	4,088	4,748
Exports in M$	654	673	1,213	896	1,478	1,411	1,552

Source: COMTRADE, SITC Rev.3, code 04

ii) Wheat exports were also net from 2000 to 2005 and have peaked in 2003. In 2006 on the other hand net imports have reached 6 Mt. Net exports of wheat flour are insignificant. According to USDA, wheat imports would fall to 2 Mt for 2007-08.

Table 28 – India's wheat trade from 2000 to 2006

	2000	2001	2002	2003	2004	2005	2006
Exports: 1000 t	813	2,649	3,671	4,093	2,008	746	47
Imports "	4	1	0	0	0	0	6,080
Balance "	809	2,648	3,671	4,093	2,008	746	-6,033
Exports en M$	92	282	362	514	322	126	8
Imports "	1	0	0	0	0	0	1,291
Balance "	91	282	362	514	322	126	-1,283

Source: COMTRADE, SITC Rev.3, code 041

[44] http://dacnet.nic.in/eands/Imports-Exports-Inflation%20Rates13-14.htm
[45] http://www.financialexpress.com/news/Rice-export-curbs-to-boost-world-prices/291471/

These huge wheat imports in 2006 are due to the fact that India has canceled its tariffs in February 2006. For Ashok Sharma, the government has deliberately revised downwards its harvest forecasts and has imported directly 5.5 Mt of wheat (on the total of 6.7 Mt imported in 2006-07) while enough wheat was available in the country: domestic needs were of 60 Mt for a production of 74 Mt. Indeed it was less costly for it to import than to raise the purchase price to farmers in order to supply the buffer stock of food security. This government action has brought about an appeal to the Supreme Court[46]. Furthermore, far from helping the wheat price to fall on the domestic market, those imports have built it up, the more so as the CFI price has increased and as traders have built speculative stocks. And Ashok Sharma concludes: "*Past experiences show that whenever India or China enter global market as bulk importers, prices shoot up and when they enter as bulk exporters the prices fall*"[47].

iii) India has remained a net corn exporter (there was no import).

Table 29 – India's corn trade from 2000 to 2006

	2000	2001	2002	2003	2004	2005	2006
Exports in 1000 t	32	114	78	543	1,069	420	637
Exports in M$	6	19	14	76	156	72	110

Source: COMTRADE, SITC Rev.3, code 044

iv) For 2007 FAO estimates that paddy rice production has stabilized at the 2006 high level of 140 Mt, that wheat production has increased to 75 Mt, that is 5 Mt more than in 2006, and that of corn has been of 15.5 Mt or 2 Mt more than in 2006[48]. The 23 April 2008 the government has revised upwards the expected production of wheat, at 76.8 Mt, so that it is likely that there would not be any import in 2008[49], the more so as India has decided to the contrary to build up its wheat stocks by 3 Mt.

However the government has limited its cereals exports in 2007: the 9 February it has forbidden the exports of wheat and wheat products in order to avoid the explosion of prices on the domestic market and to guarantee food security. The 31 October 2007 it has set a minimum export price of 425 $/t for non basmati rice, and has raised it to 500 $/t the 27 December 2007.

These export interdictions and limitations are welcome and in accordance with the conclusions of Sandra Polaski's report of Carnegie Endowment for International Peace: "*It would be most advantageous for developing countries such as India to have the flexibility to respond to price shocks based on their own conditions at the time of the shock, rather than having rigid or arbitrary disciplines imposed in advance*"[50].

e) India is a large importer of oilseeds products, essentially soybean oil and palm oil (an average of 4.6 Mt/year from 2002-03 to 2005-06), but it exports peanut oil and castor oil, sesame seeds and above all oil meals (an average of 3.9 Mt but 5.2 Mt expected for 2007-08). The oilseeds trade deficit has declined from 2003 and almost disappeared in 2006 (-291 M$).

[46] http://www.financialexpress.com/fe_full_story.php?content_id= 160136
[47] http://www.financialexpress.com/fe_full_story.php?content_id=161262
[48] http://economictimes.indiatimes.com/articleshow/2603649.cms
[49] http://news.tradingcharts.com/futures/7/1/107813317.html
[50] http://www.carnegieendowment.org/files/india's_trade_policy_choices_final.pdf

Table 30 – India's trade in oilseeds products from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	0.900	0.832	0.574	1.240	1.242	1.648	1.866
Imports	1.380	1.385	1.822	2.764	2.438	2.074	2.157
Balance	-0.480	-0.553	-1.248	-1.524	-1.196	-0.426	-0.291

Source: COMTRADE, SITC Rev.3, codes 0813, 22 et 42

f) India is also a net exporter of meat and dairy products. This can be explained by the low consumption of bovine and porcine meats in India for religious reasons and by the extent of vegetarism, as per capita meat consumption in 2000 was of only 4.5 kg, against 47.5 kg for milk, 1.5 kg for eggs and 7.1 kg for fish[51]. The world averages were respectively of 37.9 kg, 46.4 kg, 8 kg and 20.1 kg. In fact India has been a net exporter of dairy products since 2001 and has exported particularly 47,300 tonnes of skimmed milk powder in 2005-06[52]. However, in front of the explosion of the world price of milk powder, the government has forbidden their export in February 2007, which has led to a loss of earnings of $1.3 billion for producers cooperatives and the embargo has been removed in October 2007.

g) Partial conclusion: these data on India's trade in cereals and oilseeds products allow to assume that India's agricultural and food trade surplus has increased again in 2007-08 and that India is not responsible for the explosion of the world prices of cereals and oilseeds.

h) Has India's biofuels policy contributed to the explosion of world agricultural prices?

India has decreed a norm of blending 5% of biofuels with fuel oils for 2010, a norm which was to increase progressively to 20% in 2025. Actually India has become in 2006 the 4th bioethanol producer with 1.9 billion litres[53], but the production has collapsed to 200 million litres in 2007[54]. As this ethanol is produced from sugarcane molasse, that India is a net exporter of sugar and that the world sugar price has fallen since 2006 and has not exceeded in January 2008 its average level of 2007, one cannot attribute to India a responsibility in the explosion of world cereals prices.

As India consumes 4 times more of diesel than petrol, it has established in 2003 the objective to cover 20% of its diesel needs in 2011-12 from biodiesel coming not from vegetable oils, as it needs to import a lot of them, but from a non edible oil extracted from seeds of Jatropha Curcas which can be grown on arid marginal soils. However this programme will not succeed because the government has fixed a biodiesel price lower than the production cost of processors who pay to farmers a non remunerative price.

Indian farmers' organisations and NGOs defending the environment are resolutely opposed to the development of biofuels, even from jatropha or to those of the potential second generation extracted from cellulosic products[55].

Above all India's finances Minister, P. Chidambaram, has confessed the 26 March 2008, in a lecture in Singapour: "*In a world where there is hunger and poverty, there is no policy justification for diverting food crops towards bio-fuels. It is imperative that developed countries cut off subsidies on food crops for bio-fuel production. Converting food into fuel is*

[51] http://jn.nutrition.org/cgi/reprint/133/11/4048S
[52] http://www.wto.org/english/forums_e/public_forum2007_e/session11_goswami_e.pdf
[53] http://www.unctad.org/en/docs/ditcted20066_en.pdf
[54] http://www.ethanolrfa.org/resource/facts/trade/
[55] http://www.grain.org/agrofuels/?india2007

neither good policy for the poor nor for the environment"[56] and that "*As citizens of one world, we ought to be concerned about the foolishness of growing food and converting it into fuel*"[57], and the Prime Minister Manmohan Singh himself has considered the 9 April 2008 biofuels programmes as responsible for the explosion of world agricultural prices[58], underlining that *"It is particularly worrisome that the new economics of bio-fuels is encouraging a shift of land away from food crops*"[59]. All this leads to anticipate the end of government support to biofuels.

i) However India's agricultural production is much less dynamic than that of China and the agricultural added value has increased by only 2.7% per year from 2003 to 2007. And the fact that India is a net exporter of cereals (mainly rice) and that its GDP growth rate has exceeded 8% since 2004 do not imply that its domestic food needs are met. Indeed India was still housing 212 million of chronically undernourished people in 2001-03 (on 854 million at global level) and their number has even increased by 10 million since 1995-97 (202 million) after having dropped by 13 million between 1990-92 (215 million) and 1995-97.

Indeed Indian agriculture will have much more trouble than China facing its future food needs for a large set of reasons: 1) a demographic challenge with no possible comparison with China by 2050 – its population would increase by 54%, from 1.132 billion inhabitants in 2007 to 1.747 billion, against by 9% only for China, from 1.318 billion to 1.437 billion –; 2) much lower yields; 3) lower agricultural investments and subsidies; 4) higher climatic challenges (particularly due to melting of Himalaya glaciers); 5) much lower capacity for industry and services to provide employments to hundreds of millions of small farmers and landless people. To this should be added the lack of agrarian reform, the political willingness to promote agribusiness to the detriment of small farmers and the intensification of production systems (including GMOs) instead of ecological farming systems with a low recourse to inputs external to the farm, even though the abuse of chemical inputs has polluted soils and groundwater. Should also be added the lack of determination to defend the protection of Indian agriculture in the Doha Round negotiations, in the expectation that India would be able to export more services and industrial products.

Yet shouts of alarm and alternative proposals have not been missing, notably to promote farming systems protecting better the environment while being more productive, not only from small farmers organizations and NGOs but also from prestigious agronomists such as Professor M.S. Swaminathan[60] or the recommendations of the National Commission on Farmers/National Policy for farmers that he has chaired during three years and which have been endorsed by the Parliament the 15 August 2007[61].

C – The United States and the European Union

They are the main culprits for the explosion of world agricultural prices and hunger riots, at the same time through their agricultural policies and through those they have devised together and imposed to the rest of the world at the WTO and in their bilateral free trade agreements.

[56] http://www.indianembassy.org/newsite/press_release/2008/Apr/DCS2008-0022-India.pdf
[57] http://cambridgeforecast.wordpress.com/2008/04/21/indian-finance-minister-food-insecurity/
[58] http://www.financialexpress.com/news/PM-concerned-over-price-rise-criticizes-biofuel-factor/295210/1
[59] http://pib.nic.in/release/release.asp?relid=37279
[60] http://www.hinduonnet.com/af/india60/stories/2007081550320900.htm
[61] http://cari.res.in/farmers.htm

1) The United States (US)

a) Deficit or surplus of its agricultural trade?

i) According to the US: its definition of agricultural products[62] excludes alcohols and spirits as well as manufactured tobacco, while the EU includes them[63]. It seems logical to include the first but to exclude the second because it results from a strictly industrial process. Both the US and EU exclude fish products. We have seen concerning China why it would be logical to include them in agricultural products, given the increasing weight of aquaculture produced by farmers but we will however keep the usual restrictive definition of agriculture and not include them, except clearly in food products. On the other hand neither the US nor the EU have a precise definition of food products which they define as "food and beverages" without giving the list of the included products.

Table 31 – US agricultural trade from 2000 to 2007 according to USDA

$ billion	2000	2001	2002	2003	2004	2005	2006	2007
Exports	51.246	53.669	53.115	59.561	62.426	63.182	70.948	89.908
Imports	38.974	39.368	41.909	47.376	53.977	59.317	65.326	71.937
Balance	12.272	14.301	11.205	12.185	7.449	3.865	5.623	17.970

Source: http://www.ers.usda.gov/Data/FATUS/

For USDA, the balance of agricultural trade has always been positive, even though it has declined much up to 2005 before soaring in 2007 with the agricultural prices explosion.

ii) According to the WTO: the US shows large and growing deficits from 2002 to 2006, exceeding $11 billion in 2005 and 2006 for agricultural trade as well as for food trade. However, as we have seen for China and India, the WTO includes in agricultural products wood, wood pulp, synthetic rubber and synthetic textile fibres.

Table 32 – US agricultural and food trade from 2002 to 2006 according to the WTO

$ billion	2002	2003	2004	2005	2006
Exports of agricultural products	68.757	76.244	79.567	82.674	92.664
Imports "	71.515	77.273	88.112	95.803	103.648
Balance "	-2.758	-1.029	-8.545	-13.129	-10.984
Exports of food products	53.079	58.509	59.713	61.704	69.206
Importations "	55.197	60.762	66.729	72.879	80.283
Balance "	-2.118	-2.253	-7.016	-11.175	-11.077

Source: WTO trade data (http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E).

iii) The identification of actual agricultural trade in the Comtrade base confirms that, without fish products, they have shown a large surplus up to 2004 but that a small deficit has appeared in 2005 and 2006, a deficit differing somehow according to the SITC Rev.3 or the HS 2002 classifications. Which therefore contradicts USDA data.

Table 33 – US agricultural trade from 2000 to 2006 with the SITC classification

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	53.602	55.168	54.830	61.903	63.873	65.584	74.020
Imports	44.944	45.414	48.412	54.428	61.596	67.713	74.583
Balance	8.658	9.754	6.418	7.475	2.277	-2.129	-0.563

Source: COMTRADE, SITC Rev.3, codes 0 (less 03),11,121,21,22,231,261,263,264,265,268,29,4,551

[62] http://www.fas.usda.gov/USTRADE/USTAgDef.asp?QI=

[63] http://ec.europa.eu/agriculture/agrista/tradestats/annexes/annex4.htm

Table 34 – US agricultural trade from 2000 to 2006 with the HS 2002 classification

$ billion	2002	2003	2004	2005	2006
Exports	57.352	63.903	65.685	68.623	75.714
Imports	51.214	56.325	62.774	68.688	76.766
Balance	6.138	7.578	2.911	-0.065	-1.052

Source: Comtrade, HS 2002 (see the long list of codes in section A).

A large part of the gap with the surplus posted by USDA is due to its exclusion of alcohols and spirits from agricultural trade. This deficit has been increasing and has reached $4.1 billion in 2006, while, conversely, the surplus in manufactured tobacco, also excluded rightly by USDA, has fallen sharply from 2000 ($3.461 billion) to 2006 ($749 million).

Table 35 – US trade in alcohols and spirits from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	0.505	0.554	0.581	0.643	0.741	0.776	0.928
Imports	3.033	3.149	3.369	3.804	4.163	4.487	5.042
Balance	-2.528	-2.595	-2.788	-3.161	-3.422	-3.711	-4.114

Source: COMTRADE, SITC Rev.3, code 112.4

b) The US deficit in food trade is larger and dates back to 2002. This deficit can be explained above all by the necessary inclusion of fish products (tables 36 and 37) but also by the large exports of cotton and tobacco which are excluded from food trade. Without fish products a deficit is only appearing in 2005 and 2006. And there would be to the contrary a surplus if we excluded alcohols and spirits, as USDA is doing, from food trade (we have seen that USDA excludes them already from agricultural trade).

Table 36 – US trade in fish products from 2000 to 2006 according to SITC classification

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	2.956	3.207	3.135	3.283	3.724	4.089	4.268
Imports	10.413	10.279	10.572	11.588	11.883	12.677	13.956
Balance	-7.457	-7.072	-7.437	-8.305	-8.159	-8.588	-9.688

Source: COMTRADE, SITC Rev.3, code 03

We have already seen for China a huge discrepancy in fish products trade between the SITC and HS classification which cannot be explained and we will see it again for the EU.

Table 37 – US trade in fish products from 2000 to 2006 according to HS 2002 classification

$ billion	2002	2003	2004	2005	2006
Exports	2.773	2.928	3.307	3.369	3.840
Imports	8.416	9.228	9.308	9.929	10.669
Balance	-5.643	-6.300	-6.001	-6.560	-6.829

Source: COMTRADE, HS 2002, code 03

Table 38 – US food trade with fish products from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	49.848	51.206	50.794	56.266	57.396	59.821	66.954
Imports	49.198	49.702	53.021	58.664	64.783	70.932	78.227
Balance	650	1.504	-2.227	-2.398	-7.387	-11.111	-11.273

Source: COMTRADE, SITC Rev.3, codes 0, 11, 22, 4

Table 39 – US food trade without fish products from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	46.892	47.999	47.659	52.983	53.672	55.732	62.686
Imports	39.055	39.423	42.449	47.076	52.900	58.255	64.271
Balance	7.837	8.576	5.210	5.907	772	-2.523	-1.585

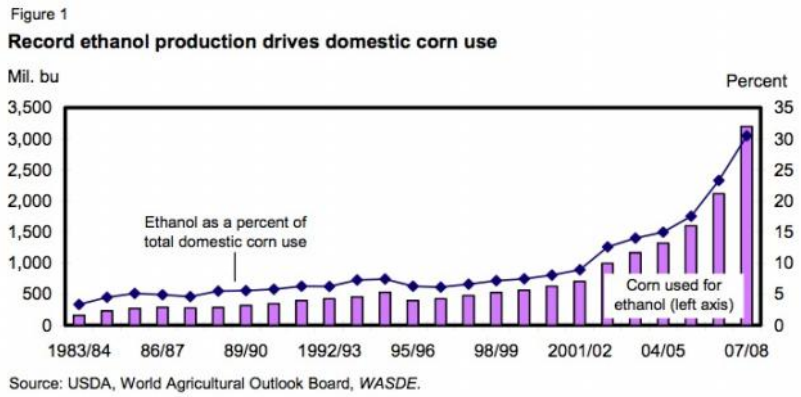
Source: COMTRADE, SITC Rev.3, codes 0 (less 03), 11, 22, 4

To conclude, the US has no lecture to give to China and India whose food trade has a surplus whereas the US food trade, even without fish products, has a deficit and contributes therefore to the explosion of world food prices. To be sure this explosion has been highly beneficial to the US in 2007 and will continue to be in 2008, allowing the US to have eventually a large surplus in its agricultural trade and food trade.

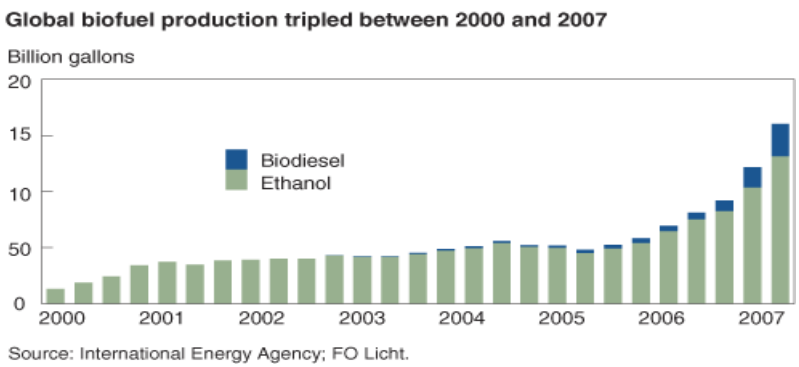
c) The US corn ethanol

The US is definitely the main culprit for the recent explosion of world agricultural prices and recent food riots, and this mainly because of its crazy objective of biofuels production and because it is price maker for the world prices of grains, then for the prices the other exporting countries can charge.

US production of corn ethanol: US corn production has fallen from 282 Mt in 2005-06 to 268 Mt in 2006-07 but has jumped to 332 Mt in 2007-08. However that converted into ethanol has risen from 41 Mt in 2005-06 to 54 Mt in 2006-07 and 79 Mt in 2007-08, or from 14.4% of production to 20.1% and 23.7%[64]. Consequently stocks have fallen from 50 Mt in 2005-06 to 33 Mt in 2006-07 and would remain at that level in 2007-08.

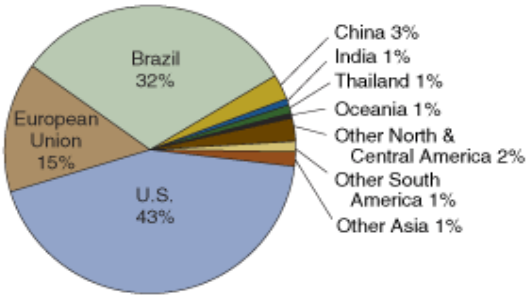


Global ethanol production has tripled from 2000 (4.68 billion gallons: 1 gallon=3.875 litres) to 2007 (16 billion gallons) but represents only 3% of global consumption of transport fuels[65].



[64] http://usda.mannlib.cornell.edu/usda/current/wasde/wasde-04-09-2008.pdf
[65] http://www.ers.usda.gov/amberwaves/november07/features/biofuels.htm

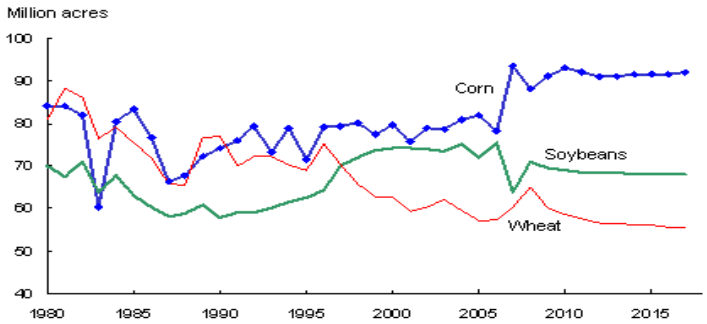
About 90 percent of global biofuel production is concentrated in U.S., Brazil, and Europe, 2007



Source: FO Licht, includes only ethanol for fuel.

US ethanol production has jumped from 1 billion gallons in 2005 to 5 billion in 2006 and would reach 9 billion in 2009[66]. The more so as the bill on energy independance of 19 December 2007 mandates to incorporate 15 billion gallons of corn ethanol or biodiesel in the fuels for transport in 2015, of which 9 billion gallons in 2008, an additional handover being expected by cellulosic ethanol from 2015 so that total ethanol should reach 36 billion gallons (136 billion litres) in 2022. But this is a pious hope as this would require a strong technological breakthrough given its present non profitability.

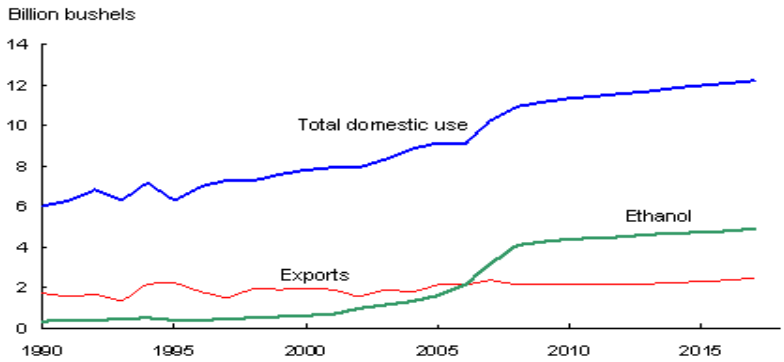
U.S. planted area: Corn, wheat, and soybeans



Source: *USDA Agricultural Projections to 2017*, February 2008.
USDA, Economic Research Service.

Thus the share of corn production going to ethanol would rise from 19% in 2006-07 to 25.4% in 2007-08, 32.8% in 2011-12 and 33.2% in 2015-16.

U.S. corn: Domestic use, ethanol, and exports



Source: *USDA Agricultural Projections to 2017*, February 2008.
USDA, Economic Research Service.

[66] http://www.ers.usda.gov/amberwaves/september07/features/ethanol.htm

These mandatory objectives to blend ethanol with gas (or biodiesel with diesel) – oil companies are obliged to reach them on pain of heavy fines – have led USDA to forecast an increase in the corn area up to 2015, to the detriment of other cereals and soybean, and an increase in the share of corn used for ethanol to the detriment of corn fed to animals (however they will benefit from the feed by-products of ethanol) and of exports: the graph above shows that corn for ethanol has already exceeded exported corn in 2007.

USDA has eventually acknowledged the responsibility of US corn ethanol in the explosion of world agricultural prices: "*The data suggest that while U.S. corn used for ethanol production had only a small effect on global markets in the 1980s and 1990s, the increase in U.S. ethanol production over the past 5 years and the related significant changes in the structure of the U.S. corn market have had a more pronounced impact on the world's supply and demand balance for total coarse grains recently. Importantly, since the United States is the world's largest corn exporter, some of the higher prices resulting from increased U.S. demand has spilled over onto world markets*"[67]. Enlarging its analysis to all world biofuels, the author adds: "*The 11-million acre increase in the area of biofuels feedstocks harvested between 2004 and 2007 accounted for about 24 percent of the 45 million acre increase in total area harvested during the same period*". Furthermore he underlines the highly contrasted social impact that a 50% increase in the price of the staple products has on households budget according to countries: in developed countries food expenditures rise by 6% which implies a rise lower than 1% in their whole budget; in low income they rise by 21% which implies a rise of 10% of their whole budget (from 50% to 60%).

For Bruce Babcock the corn price paid to US farmers is likely to reach 220 $/t (5.60 $/bushel) for the 2008 harvest[68] against 158 $/t anticipated by USDA for 2007-08, and actual prices of 120 $/t in 2006-07 and 79 $/t in 2005-06[69]. He infers from this that ethanol production at that 220 $/t corn price would not be profitable. Yet the possible removal of the mandatory blending of ethanol in gas would reduce the corn price to only 210 $/t. And if we added the removal of the tax exemption of 51 cents/gallon for ethanol processors, the corn price would fall to only 190 $/t. However if the duty on ethanol imports from Brazil (54 cents/gallon + 2% ad valorem) were eliminated, the corn price would fall much more.
Whatever the realism of such prospects, they have the virtue of underlining the large impact of the US ethanol production on the US corn price and, consequently, on the world corn price and, as we will see, on the world price of the other cereals and oilseeds.

Babcock analyses also the potential incidence of another factor hard to master: climate. If a drought such as that of 1988 would occur, with a 25% drop in yield in relation to a normal year, the corn price at the farm gate would jump to 339 $/t! This would imply a minimum ethanol price of 3.30 $/gallon to allow processors to continue to produce the mandatory level, what they could do only with a subsidy of 1.50 $/gallon or $15 billion for the whole ethanol production!

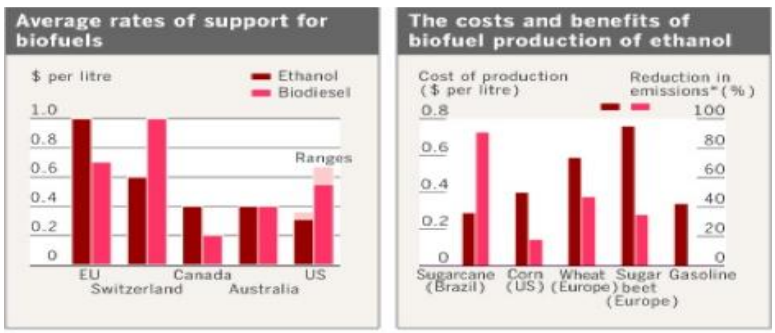
On the other hand his colleague Chad E. Hart notes that, in early January 2008, the production capacity was of 7.5 million gallons and that it would reach 13 million gallons in 3 years given the capacity of 5.8 million gallons in the plants under construction[70]. Given the high price of the oil barrel which was quoted 2.50 $/gallon in the near term against 2.30 $/gallon for

[67] http://www.ers.usda.gov/Publications/WRS0801/WRS0801.pdf
[68] http://www.card.iastate.edu/iowa_ag_review/Spring_08/article2.aspx
[69] http://www.foodbusinessnews.net/news/headline_stories.asp?ArticleID=92594
[70] http://www.card.iastate.edu/iowa_ag_review/winter_08/article4.aspx

ethanol, this benefit of 20 cents/gallon plus the tax break of 51 cents/gallon for oil companies to blend it with gas gives to ethanol a renewed interest for them and for consumers. And it is the renewed interest in ethanol profitability which shoots up the corn price. This explains that the corn production destined for ethanol has jumped by 47% from 2006-07 (54 Mt) to 2007-08 (79 Mt).

Hart underlines that, at the same time, the large increase in corn exports expected in the marketing year 2007-08 – at 64 Mt against 54 Mt in 2006-07 – stems above all from the dollar depreciation which has conferred a competitive advantage to the US corn over those of China or Brazil but also to corn importing countries with a strong currency, among which euro, yen and sterling.

Hart concludes: "*Overall, the picture looks bright for corn… For the ethanol sector, 2008 looks to be another year of adjustment. Input prices (mainly corn) continue to be high, but energy --especially gasoline-- prices are projected to stay higher. The passage of the 2007 energy act provides government support for additional ethanol production. The industry will continue to expand, but margins will likely remain relatively tight*".



Source : http://www.treehugger.com/files/2007/11/biofuels_subsidies.php

d) Links between the rise in corn price due to ethanol and the price of the other grains

As already seen, the surge in corn prices in 2006-07 – together with the fixed direct payments received independently of the price level – has fostered a large increase in the acreage sown in corn and a record harvest in 2007, to the detriment of the acreage sown in wheat and soybean, and consequently of their production level (minus 8 Mt for wheat and minus 16 Mt for soybean), so that their prices have jumped by a higher rate than that of corn. Therefore the area sown in corn for the harvest of 2008 (and the marketing year 2008-09) has fallen by 8% over 2007 but has increased by 6% for wheat and 18% for soybean[71].

Therefore USDA, based on futures markets, foresaw a net setback in wheat prices given the large production increases worldwide in 2008 – and indeed it has already fallen by 43% for the HRW and by 33% for the SRW between the last week of February and the second week of May – but foresaw a continuous increase in the prices of corn and soybean given the demand of biofuels. Knowing that the soaring price of soybean oil is also linked to the soaring prices of palm oil and rapeseed oil, the main sources of biodiesel in Asia and Europe.

We have also seen (pages 8 and 9) how the US ethanol boom shares a large responsibility in the explosion of the global price of rice.

[71] http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1136

When, at the question "*Do biofuels play a role in this explosion* [of world agricultural prices] *?*" Philippe Chalmin, professor of economics at Paris-Dauphine University, answers the 22 April 2008 "*The US corn programme has a direct responsibility on the rise of corn price… but biofuels do not bear any responsibility on the rise of wheat and rice prices*"[72], he did clearly not understand the links between these grains.

Hervé Guyomard, director of research at INRA, has understood it quite well: "*It is nevertheless clear that the large amount of corn used to make ethanol in the US has generated the rise in the price of this commodity and, by contagion effect, in the price of other corn substitutes*"[73].

e) The US biodiesel from soybean oil

The energy bill of 2005 had fixed an objective to use 500 million gallons of biodiesel in 2008 and 1 billion gallons in 2012. US soybean oil production used for biodiesel represented in August 2007 23.2% of the domestic consumption of soybean oil (469 million of pounds) but dropped to only 12.2% (319 million of pounds) in January 2008[74]. Finally biodiesel production did not increase from 2006-07 to 2007-08, at 2.8 billion pounds or 373 million gallons (1 gallon biodiesel weighs 7.5 pounds), therefore below the official target.

On the existing 170 plants, 20 are not working and the others do not work at full capacity and do not make any profit. Indeed most of them have got started when the price of soybean oil was of 20 cents/pound whereas it was at 70 cents the last week of March 2008[75]. At the same time the biodiesel wholesale price has climbed from 2.50 $/gallon to 4.70 $/gallon. Despite a tax break of 1 $/gallon the biodiesel costs about 4 $/gallon, a price higher than that of diesel, which slowdowns domestic demand, but the bulk of it is exported to the EU.

We have also shown page 11 how the spike in oilseeds prices is linked to the US ethanol boom. The more so as, paradoxically, the US has been a net importer of vegetable oils since 2003, which has also contributed to raising their world price[76].

d) To conclude on the US responsibility in grains prices hikes

It is clear that, having allocated already 79 Mt of corn to ethanol production in 2007-08 – or 23.7% of corn production, but also 24% more than to corn exports and 82.5% of corn global exports –, and knowing furthermore that US FOB prices of corn are the world prices, the US is the first culprit for the explosion in the world corn price but also of the other grains (cereals and oilseeds) given their substitution effects.

For FAO, the US corn ethanol is responsible for one third of the rise in the world corn price[77]. The IMF goes further and has stated the 8 May 2008 that 70% of the surge in the corn world

[72] http://www.lemonde.fr/archives/article/2008/04/22/philippe-chalmin-le-defi-majeur-de-la-planete-au-xxie-siecle-sera-alimentaire_1036889_0.html
[73] http://www.latribune.fr/info/Les-biocarburants-alimentent-ils-la-flambee-des-prix-agricoles---~-20080403U7DBR5L-$Channel=Journal-$SubChannel=La%20Tribune%20Forum
[74] http://www.aces.uiuc.edu/news/stories/news4332.html
[75] http://www.desmoinesregister.com/apps/pbcs.dll/article?AID=/20080330/BUSINESS/803300315/-1/NEWS04
[76] http://www.ers.usda.gov/Briefing/SoybeansOilcrops/2008baseline.htm
[77] http://news.mongabay.com/2008/0214-fao.html

price is due to ethanol production[78]. As for the Work Bank it estimates that bioethanol is responsible for 65% of the surge in agricultural prices[79].

The responsibility of the US corn ethanol in the explosion of world agricultural prices is all the more unquestionable that the second exporter, Brazil, produces it from sugarcane and not from corn. And we have seen that the world price of sugar (table 1) has remained very low in 2007 and was still lower in February 2008 than its average level of 2006. In that sense, President Lula would have been right to say that Brazil's bioethanol has nothing to do with the explosion of the world prices of grains rather than saying that biofuels worldwide had nothing to do with it. We will come back to Brazil in section D.

The US is threatening all the more the future world agricultural prices that it has no economic reason to stop the production of biofuels as the explosion of those prices has shooted up the US net agricultural income by 48% in 2007[80] and the surplus of agricultural trade (according to the USDA definition) at $11.9 billion against $4.6 billion in 2006[81]. For 2008 the net income would rise by 4%[82] and the agricultural trade surplus would jump at $24.5 billion. And this all the more that the explosion in the oil price makes the biofuels more and more profitable and allows to drop the subsidies to ethanol.

Never say die however, thanks to God, as the three candidates to the US presidency have just had a change of heart about the support to corn ethanol. Particularly Barack Obama, the most likely next President, which is all the more noteworthy that, being a senator to Congress for Illinois – a State ranking second for the production of corn and ethanol –, he has been for a long time one of its most active promoters. Thus he stated on NBC "Meet the press" the 4 May 2008: "*My top priority is making sure people are able to get enough to eat. If it turns out we need to make changes in our ethanol policy to help people get something to eat, that has got to be the step we take*"[83]. Unfortunately the Farm Bill just voted by Congress has increased the subsidies to corn and to biofuels for the next five years.

2) The European Union

The EU-27 pretends to have the mission to feed the rest of the world and raises at the same time the spectre of China and India! This is laughable and afflicting given the unquestionable fact that it is the EU, even more than the US, which is receiving a massive food aid from developing countries.

a) Indeed the EU agricultural trade has always been in deficit

i) Yet, for the European Commission, the EU-25 agricultural trade had a large surplus in 2005 and particularly in 2006, close to $10 billion (after conversion from euro), these amounts taking into account the "confidential trade" (trade not directly attributable to a specific product) for $4 billion of net exports in 2006. Above all the EU considers manufactured tobacco as an agricultural produce (as does the WTO Agreement on Agriculture), which should be discarded.

[78] http://www.imf.org/external/np/speeches/2008/050808.htm
[79] http://www.fao.org/fileadmin/user_upload/foodclimate/HLCdocs/HLC08-inf-1-E.pdf
[80] http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1254
[81] http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1196
[82] http://www.ers.usda.gov/Features/FarmIncome/
[83] http://www.washingtontimes.com/article/20080505/NATION/903546115

Table 40 – EU-25 agricultural trade from 2000 to 2006 according to the EU Commission

	2000	2001	2002	2003	2004	2005	2006
Exports in € billion	56.633	58.355	59.327	58.724	60.225	66.119	76.181
Imports "	59.105	62.079	61.820	60.000	61.838	64.447	68.278
Balance in "	-2.472	-3.724	-2.493	-1.276	-1.613	1.672	7.903
Dollar for 1 euro	0.9236	0.8956	0.9456	1.1312	1.2439	1.2441	1.2556
Exports in $ billion	52.306	52.263	56.100	66.429	74.914	82.259	95.653
Imports "	54.589	55.598	58.457	67.872	76.920	80.179	85.730
Balance "	-2.283	-3.335	-2.357	-1.443	-2.006	2.080	9.923

Source: European Commission, http://ec.europa.eu/agriculture/agrista/tradestats/2006/index_sta.htm#parta1

What's more, the European Commission boasts of having supplanted the US as the first world exporter of agricultural products since 2003: "*In 2003 the EU overtook the US as the leading agricultural exporter. The second development is even more recent and indicates that the EU's agricultural trade balance has improved significantly with export growth outstripping that of imports, so that by 2006 it had turned into a net exporter of agricultural products. The improvement for the EU is all the more surprising as it comes despite the strengthening of the euro and despite enlargement, which increased net agricultural imports*"[84].

However the EU Commission forgets that the US does not take into account spirits in its agricultural trade and that the euro appreciation against the dollar has artificially boosted the EU exports in dollars. We will come back on this further on.

Table 41 – EU-25 trade in alcohols and spirits from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	4.600	4.730	5.153	5.993	6.424	6.991	8.081
Imports	0.739	0.790	0.865	0.993	1.120	1.130	1.183
Balance	3.861	3.940	4.288	5.000	5.304	5.861	6.898

Source : COMTRADE, SITC Rev.3, code 1124

The EU Commission boasts even more of remaining the first world importer of agricultural products, and consequently to be the epitome of the good pupil for the access of other countries to its market.

ii) For the WTO, the EU-25 agricultural trade deficit has reached $28.4 billion in 2006, but this is meaningless as it considers wood, wood pulp and synthetic textile fibres ad agricultural products.

Table 42 – EU-25 agricultural trade from 2000 to 2006 according to the WTO

$ billion	2000	2004	2005	2006
Exports	56.033	78.106	84.206	95.308
Imports	79.112	107.701	113.326	123.723
Balance	-23.079	-29.595	-29.120	-28.415

Source: WTO trade data (http://www.wto.org/english/res_e/statis_e/its2007_e/its07_merch_trade_product_e.pdf)

iii) In the Comtrade SITC Rev.3 classification the EU-25 agricultural trade has had a large deficit from 2000 to 2006, which fell at -$4.367 billion (-€3.478 billion) in 2006, after a trough at -8.968 billion in 2004.

[84] http://ec.europa.eu/agriculture/publi/map/02_07.pdf

Table 43 – EU-25 agricultural trade from 2000 to 2006, in the SITC classification

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	49.096	49.114	53.060	62.902	69.590	73.750	85.163
Imports	55.366	56.509	59.626	69.224	78.558	80.767	89.530
Balance	-6.270	-7.395	-6.566	-6.322	-8.968	-7.017	-4.367

Source: COMTRADE, SITC Rev.3, codes 0 (less 03),11,121,21,22,231,261,263,264,265,268,29,4,551

If we took into account, as the EU does, the trade in manufactured tobacco, the deficit would be reduced by around $2 billion in 2005 and 2006.

Table 44 – EU-25 trade in manufactured tobacco from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	1.653	1.578	1.718	1.796	1.864	2.308	2.488
Imports	0.246	0.229	0.223	0.259	0.250	0.234	0.567
Balance	1.407	1.349	1.495	1.537	1.614	2.074	1.921

Source: Comtrade SITC Rev.3, code 122

iii) In the HS 2002 classification, the EU-25 agricultural trade (only available from 2002 but we could have taken the HS 1996 classification for 2000 et 2001) shows similar data as those of SITC Rev.3, and shows also deficit of $4.306 billion in 2006.

Table 45 – EU-25 agricultural trade from 2002 to 2006 in the HS 2002 classification

$ billion	2002	2003	2004	2005	2006
Exports	54.463	63.379	70.197	75.664	85.382
Imports	60.282	70.176	78.947	81.979	89.688
Balance	-5.819	-6.797	-8.750	-6.315	-4.306

Source: Comtrade, HS 2002 : 01 to 24 (less 03), 290543, 290544, 3301, 3501, 3502, 3503, 3504, 3505, 380910, 4101, 4102, 4103, 4301, 5001, 5002, 5003, 5101, 5102, 5103, 5201, 5202, 5203, 5301, 5302

iv) Coming back to the comparison of the EU-25 and US agricultural trade in the same SITC classification (tables 33 and 43) accredits the EU assertion that it has replaced the US since 2003 as the first exporter of agricultural products. However this is essentially due to the euro appreciation over the dollar. If we stabilize the euro-dollar exchange rate at its 2003 level of 1.1312 dollar for 1 euro, the US would have remained the first exporter also in 2004 and if we stabilize the exchange rate at its 2002 level of 0.9456 dollar for 1 euro or even at the parity of 1 euro for 1 dollar, the US would have remained the first agricultural exporter up to 2006.
Therefore the EU pretension that it has exceeded the EU as the first agricultural exporter despite the euro appreciation is not justified: "*Admittedly the growth of EU exports reflects the strengthening of the euro against the dollar. Expressed in terms of €, EU exports increased by 14% in the last 5 years compared to 55% expressed in US$. Of course, regardless of currency the position of the EU as the largest exporter does not change*".

b) The EU-25 food trade has faced an even higher deficit, at -$20.217 billion (-€16.101 billion) in 2006

Admittedly this can be mostly explained by the huge deficit in fish products but, even without them, the deficit would have been of $3.490 billion (€2.780 billion). If we can argue of not including fish products in agricultural trade, we cannot do it for food trade. Particularly in the present context of the food riots linked to the prices explosion of food products. Without forgetting that one third of fish products trade is devoted to feedstuffs, including for pets.

i) The EU-25 trade in fish products has a huge deficit, of $16.727 billion (€13,322 billion) in 2006 in the SITC classification and of $13.986 billion (€11,139 billion) in the HS 2002 one.

Table 46 – EU-25 trade in fish products from 2000 to 2006 in the SITC classification

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	1.708	1.880	2.067	2.405	2.663	2.802	3.042
Imports	10.818	11.490	11.742	13.947	15.050	17.320	19.769
Balance	-9.110	-9.610	-9.675	-11.542	-12.387	-14.518	-16.727

Source: COMTRADE, SITC Rev.3, code 03

We have already underlined that there is an inconsistency in the Comtrade data for fish products between the SITC Rev.3 classification and the HS 2002 classification.

Table 47 – EU-25 trade in fish products from 2002 to 2006 in HS 2002 classification

$ billion	2002	2003	2004	2005	2006
Exports	1.696	1.996	2.253	2.368	2.530
Imports	9.603	11.453	12.375	14.311	16.516
Balance	-7.907	-9.457	-10.122	-11.943	-13.986

Source: COMTRADE, HS2002, code 03

ii) Therefore, with fish products, the EU-25's food deficit exceeds $20 billion in 2005 and 2006 (SITC classification)

Table 48 – EU-25 food trade from 2000 à 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	44.682	44.740	48.254	56.095	61.087	64.963	74.966
Imports	54.498	56.621	60.346	71.593	80.763	85.458	95.183
Balance	-9.816	-11.881	-12.092	-15.498	-19.676	-20.495	-20.217

Source: COMTRADE, SITC Rev.3, codes 0, 11, 22, 4

Table 49 – EU food trade without fish products from 2000 to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Exports	42.974	42.860	46.187	53.690	58.424	62.161	71.924
Imports	43.680	45.131	48.604	57.646	65.713	68.138	75.414
Balance	-0.706	-2.271	-2.417	-3.956	-7.289	-5.977	-3.490

Source: COMTRADE, SITC Rev.3, codes 0 (less 03), 11, 22, 4

iii) Coming back again to the comparison of the EU-25 and US food trade in the same SITC classification (tables 38 and 48), it appears that, contrary to the EU pretension, US food exports have exceeded the EU ones in 2003 and that, if the dollar-euro exchange rate of 2003 had been maintained, the US exports would have exceeded the EU-25 ones up to 2006.

Table 50 – With the 2003 $/€ exchange rate, US food exports exceed the EU ones up to 2006

$ billion	2000	2001	2002	2003	2004	2005	2006
Food trade in current dollars and euros							
US exports (table 38)	49.848	51.206	50.794	56.266	57.396	59.821	66.954
EU exports (table 48)	44.682	44.740	48.254	56.095	61.087	64.963	74.966
Food trade from 2004 with the dollar-euro exchange rate of 2003: 1 euro = 1.1312 dollar							
US exports (table 38)				56.266	57.396	59.821	66.954
EU exports				56.095	54.177	57.614	66.486

Source: COMTRADE, SITC Rev.3, codes 0 (less 03), 11, 22, 4

c) The EU-27 is the largest net importer of oilseeds products, far ahead China: 17 Mt of oilseeds grains (of which 15.3 Mt of soybean), 27 Mt of oil meals (of which 22.1 Mt of soybean) and 8.2 Mt of vegetable oils (of which 1.4 Mt of soybean) in 2006-07.

d) The EU-27 has become in 2007-08 a net importer of 12.4 Mt of cereals

Table 51 – The EU-27 has become a large net importer of cereals in 2007-08

Million tonnes	2005-06			2006-07			2007-08*		
	Imports	Exports	Balance	Imports	Exports	Balance	Imports	Exports	Balance
Wheat	6.76	15.69	8.93	5.14	13.87	8.73	6.50	9.00	2.5
Coarse grains	2.78	4.36	1.58	7.99	4.69	-3.30	18.96	5.06	-13.90
Rice	1.73	0.16	-1.57	1.30	0.15	-1.15	1.10	0.15	-0.95
Total	11.27	20.21	8.94	14.43	18.71	4.28	23.06	14.21	-12.35

Source: http://usda.mannlib.cornell.edu/usda/current/wasde/wasde-05-09-2008.pdf *: forecast of 9 May 2008

For USDA, the EU-25 would remain net exporter of 2.5 Mt of wheat in 2007-08 (9 Mt of exports and 6.5 Mt of imports) but its net imports of coarse grains would be of 13.9 Mt (19 Mt of imports and 5 Mt of exports) and of 1 Mt of rice[85].

This would put the EU-25 at the 3rd rank of net importers of cereals in 2007-08 (for the other countries we have only the data for wheat, corn; barley and rice), after Japan (23.2 Mt) and Mexico (13.3 Mt) but before South Korea (11.8 Mt) and Egypt (11 Mt).

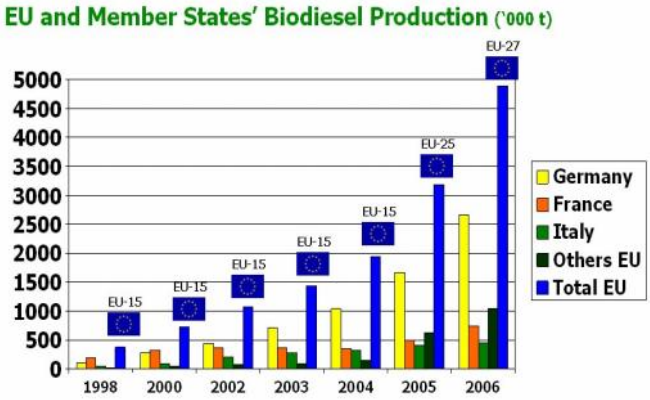
This USDA estimate for the marketing year 2007-08 is confirmed by ONIGC (French Interprofessional Office of large crops) whic has registered at the end of April 2008, that is 2 months before the end of the marketing year), 24 Mt of imports (of which 12.3 Mt of corn, 5 Mt of sorghum and 4.4 Mt of wheat) against 12.6 Mt of exports (of which 7.3 Mt of wheat and wheat flour and 5.3 Mt of barley and malt)[86].

e) The rise in EU biofuels shares a responsibility in the explosion of world agricultural prices

The EU has adopted an objective of blending 5.75% of biofuels in the fuels used in transportation in 2010 and of 10% in 2020, France an objective of 7% in 2010 and 10% in 2015 and Germany of 17% in 2020.

i) EU biodiesel: it represented in 2006 80% of EU biofuels (4.9 Mt against 1.2 Mt for bioethanol) and the production capacity has jumped to 10.2 Mt in 2007, allowing to reach the 10% objective in advance[87]. Thus the EU accounted for 77% of the world biodiesl in 2006, far ahead the US (836,000 t). In 2006/07, the EU biodiesel has used 64% of the rapeseed oil used in the EU-25 and, despite that the EU production of rapeseeds has doubled from 8 Mt in 1992 to 16 Mt in 2006, the EU trade balance in rapeseeds has been in deficit since 2006-07[88]. Indeed the EU-25 has contributed to the soaring prices of vegetable oils since its imports have almost doubled from 2000 (5.2 Mt) to 2006 (10 Mt)[89].

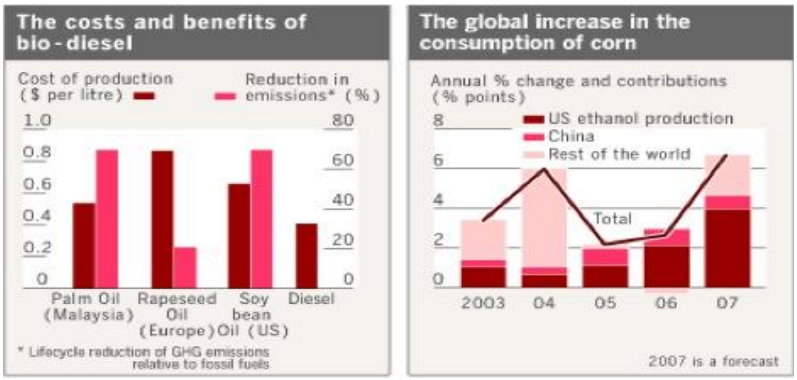
[85] http://usda.mannlib.cornell.edu/usda/current/wasde/wasde-05-09-2008.pdf
[86] http://www.onigc.fr/pages/frliste.asp?affichage=2&codelan=FR&cleuti=&coderub=2&codssrub=4
[87] http://www.ebb-eu.org/EBBpressreleases/EBB%20press%20release%202006%20stats%202007%20cap%20Final.pdf
[88] http://www.inra.fr/internet/Departements/ESR/publications/iss/pdf/iss07-2Jac.pdf?PHPSESSID=9a464bd90ff3f4bda8e7c214d9d92f8f
[89] http://ec.europa.eu/agriculture/agrista/tradestats/2007/trade_eu27_sem/agg_qty_imp_page_001.htm



Source : http://www.ebb-eu.org/stats.php

However the actual EU biodiesel production has stagnated in 2007, in part from the competition with the imports of 700,000 tonnes of US biodiesel (B99), where soybean and biodiesel are highly subsidized (300 $/t) and because the EU has no import duty on oilseeds and vegetable oils since the 1960's and because the duty on biodiesel is only of 6.5%[90]. The B99 was sold in September 2007 at 860 $/t, much less expensive that the 1,114 $/t for the raw rapeseed oil before being refined to make biodiesel, the refining costing 125 $/t[91]. Furthermore these allegedly US biodiesel exports are for a large part re-exports of biodiesel imported in the US from South-East Asia and Latin America before being blended with 1% of US common diesel (B99 contains 1% diesel), which is enough to get a tax break of 1$ per gallon: this is what has been called the "splash and dash" system! That is why the EU processors are pressuring the EU Commission to launch legal proceedings at the WTO against the US.

As the EU is importing on average 45% of its needs in vegetable oil and is more generally the first importer of oilseeds products, it follows that its growing demand linked to biodiesel has largely contributed to the price hikes of their world prices, and particularly of vegetable oils, even if less than 5% of the EU biodiesel is produced from imported vegetable oils, mainly palm oil.



Source : http://www.treehugger.com/files/2007/11/biofuels_subsidies.php

On the other hand the soaring price of rapeseed oil, in line with that of oil, has reduced to a large extent the profitability of biodiesel production so that a large number of plants are working at a loss since the middle of 2007 and projects to extend their capacity have been

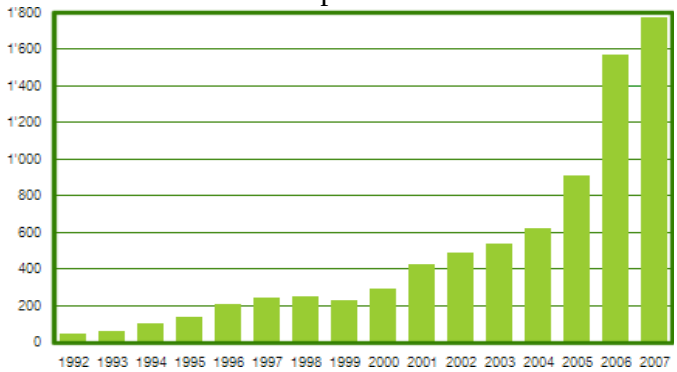
[90] http://www.ebb-eu.org/EBBpressreleases/EBB%20position%20RED%20Directive%20Jan%202008.pdf
[91] http://business.timesonline.co.uk/tol/business/industry_sectors/natural_resources/article2557242.ece

cancelled[92]. In Germany, which has produced 54% of the EU biodiesel in 2006, the government has cut 20% of the tax break on biodiesel so that the tax on biodiesel is only 20% lower than the tax on common diesel.

ii) EU bioethanol: the EU production of bioethanol has increased on average by 28% per year from 1992 to 2007 when it has reached 1.77 billion litres (Bl) (of which 578 Ml in France, the 1st EU producer), putting it at the 4th rank after the US (24.5 Bl), Brazil (21.3 Bl) and China (1.8 Bl). According to a German source however the EU would be at the 3rd rank in 2007 (2.16 Bl) after the US (24.6 Bl), Brazil (19 Bl) and before China (1.84 Bl).

However the EU consumption of biodiesel has reached 2.7 Bl in 2007, owing to imports of 1 Bl from Brazil, despite an import duty of 1$/gallon (0.26 $/l)[93] or a total of $260 million.

EU bioethanol production in Mdl



Source : http://www.eners.ch/plateforme/infos/eu-bioethanol.php

The 1.560 billion litres of EU bioethanol in 2006 have been produced from 1.4 Mt of wheat (32.3% of EU ethanol), 1.1 Mt of barley (28.2% of the EU ethanol), 0.5 Mt of corn (12.8% of EU ethanol) and 0.8 Mt of sugarbeet (5.6% of EU ethanol). But the objective for 2012 to reach 10.1 Bl of bioethanol would require 11.2 Mt of wheat, 1.1 Mt of barley, 3.2 Mt of corn, 0.5 Mt of rye and 35.2 Mt of sugarbeet. If bioethanol has had already a significant impact on their prices surge, the impact would be infinitely larger up to 2012 if the objective is maintained and reached.

INRA (French National Institute of Agronomic Research) estimates that to incorporate 5.75% of biofuels in transport fuels in 2010 without imports would require 13 million hectares, that is 20% of the present EU arable land, which would harm the environment and increase significantly rapeseed prices. A fortiori the 10% objective for 2020 would have a much greater impact on the arable land and the environment, not only in the EU but also in DCs from which would come increased imports.

iii) Criticisms to the EU biofuels and more general criticisms: the criticisms of the civil society demanding a moratorium of the EU production and imports of biofuels[94] and those of many politicians of Member States and of the European Parliament have led the European Commission to propose import restrictions of vegetable oils from countries where their production is harmful to the environment.

[92] http://www.rsc.org/chemistryworld/News/2008/April/04040803.asp
[93] http://www.frost.com/prod/servlet/market-insight-top.pag?Src=RSS&docid=120514123
[94] http://www.econexus.info/agrofuel_moratorium_call.html

Lately several high ranking EU officials have asked to reconsider the EU objectives, among whom the EU Commissioner for the Environment, Stavros Dimas, who has declared to Die Welt: "*The European Union objective to obtain in 2020 that 10% of fuels would come from plants should not be the absolute priority if the price to be paid is that nature and men would suffer*"[95]. The British Prime Minister Gordon Brown has asked to reconsider the EU biofuels programme[96]. Romano Prodi and Angela Merkel have also expressed their concerns.

Nevertheless the European Commission has rejected the 14 April 2008 the statement of Jean Ziegler, the United Nations Special Rapporteur on the right to food, that the production of biofuels is "*a crime against mankind*"[97], arguing that questioning this component of its programme to fight global warming would also challenge its objective to reduce by 20% in 2020 the emission of greenhouse gas. In so doing the Commission remains deaf to the conclusions of its own Research Center – for which the environment costs of biofuels will exceed certainly all the benefits which might be expected – and also of the European Environment Agency which has asked to suspend urgently the 10% objective until a comprehensive impact assessment will be carried out[98]. This underlines that the Commission follows only the biofuels industry which denies they may have any impact on world prices.

Thus the French bioethanol industry denies having any impact on the explosion of world agricultural prices: "*The French and European model of bioethanol has no impact on food security, stated in a common press release the SNPAA (national union of producers of agricultural alcohol), the CGB (confederation of sugar beet producers) and Passion Cereals (cereals growers). On the occasion of concerns expressed lately on the food situation of many developing countries, the production of biofuels "is sometimes blamed as one of the causes of the present shortage". Now, the three signatories of the press release are explaining that the French and European model to develop bioethanol "is based on sensible objectives (10 % in the EU in 2020), criteria of sustainability and a diversification of feedstocks (wheat, sugarbeet, corn)". In France, the national objective aiming at blending 7% of bioethanol in gas in 2010 requires hardly 3% of the agricultural area grown in cereals and sugarbeets*"[99].

The French biodiesel (diester) industry is going even further: "*Diester favours the availability of food commodities worldwide. For each litre of Diester produced in France, 1.5 kg of feed for cattle is produced as oil meal. This feed, rich in proteins, replaces the soybean cake traditionally imported from the American continent. In 2010, there will be 3.5 million tonnes of cakes which will be produced that way in France and there will be as many soybean cakes which will remain available on the world markets. This might seem perhaps paradoxical, but the French production of Diester from rapeseed and sunflower is clearly an answer to the food needs in meats and animal products*"[100].

Yet alarm bells have not been missing in the last months, including from the first world food corporation, Nestle, and from international institutions promoting the neo-liberal globalization such as OECD, the World bank, the IMF and FAO.

[95] http://www.lesechos.fr/info/inter/4716963.htm
[96] http://www.reportonbusiness.com/servlet/story/RTGAM.20080410.wfood0411/BNStory/Business/?pageRequested=1
[97] http://news.yahoo.com/s/afp/20080414/sc_afp/euunfarmpovertyenergypoliticsbiofuel_080414143918
[98] http://commentisfree.guardian.co.uk/david_cronin/2008/04/fuelling_the_food_crisis_1.html
[99] http://www.agpb.fr/fr/depeche/depeche.asp#3041
[100] http://www.agrisalon.com/06-actu/article-20380.php?search=sp%E9culation

For Peter Brabeck, Nestlé's president, "*If we want to cover 20% of energy needs from biofuels, as it is foreseen, there will not be anything to eat*"[101]. This acknowledgement is all the more paradoxical that Nestlé profits have again jumped with the agricultural prices explosion[102].

An OECD report of 12 September 2007 concluded: "*The current push to expand the use of biofuels is creating unsustainable tensions that will disrupt markets without generating significant environmental benefits… Governments should cease creating new mandates for biofuels and investigate ways to phase them out… Only sugarcane-to-ethanol in Brazil, ethanol produced as a by-product of cellulose production (as in Sweden and Switzerland), and manufacture of biodiesel from animal fats and used cooking oil, can substantially reduce GHG compared with gasoline and mineral diesel*"[103].

As for the World Bank, it underlines in a 2007 report the negative ecological impact of the US corn ethanol and questions even the positive ecological impact of Brazil sugarcane ethanol and of Indonesian biodiesel. The report concludes: "*These considerations raise questions about classifying all bioethanol and biodiesel as environmental goods*"[104]. According to FAO "*A recent report by Mitchell (2008) of the World Bank has concluded that 65 percent of the rise in prices is due to biofuels and factors related to their rapid increase in demand for feedstocks*"[105].

The IMF itself underlines that "*Biofuel production is seriously affecting food markets— 20–50 percent of feedstocks, especially corn and rapeseed, in major producing countries are being diverted from food to biofuels… Ambitious mandates about biofuel use in the United States and the European Union imply that diverting crops toward biofuel production will continue for at least another five years… Demand for biofuels has propelled not only prices of corn but also those of other food products, because corn is used as input in their production (meat, poultry, dairy) or as a close substitute. In the United States, for example, it has exerted significant upward pressure on prices of soybean meal and soybean oil (because corn and soybeans compete for the same acreage), which has contributed to the price increases of other edible oils through substitution effects. To a lesser extent, demand for biodiesel has also affected prices of edible oils, because soybean oil and other vegetable oils such as palm oil and rapeseed oil are used as biodiesel inputs*"[106]. According to a recent statement of the IMF deputy general director biofuels demand explains 70% of the surge in corn price and 40% of that in the soybean price[107].

We should not conclude for that matter that all types of biofuels should be condemned but only those which are competing with food production. Clearly biogas coming from the methanisation of wastes should be encouraged provided that, for agricultural wastes, this would not reduce the soil balance in organic matter, through returning the compost issued from methanisation. The direct use of raw vegetable oil in farmers' tractors and cars should be promoted. And the second generation of biofuels, coming from wood and other cellulosic matter, if they happen to be profitable, should not reduce the available land for food

[101] http://www.jdf.com/enquete/2008/04/19/04004-20080419ARTHBD00077-causes-et-consequences-de-la-flambee-des-prix-des-matieres-agricoles.php
[102] http://www.busrep.co.za/index.php?fSectionId=&fArticleId=4266900
[103] http://www.cfr.org/publication/14293/oecd.html
[104] http://siteresources.worldbank.org/INTOGMC/Resources/Considering_trade_policies_for_liquid_biofuels.pdf
[105] http://www.fao.org/fileadmin/user_upload/foodclimate/HLCdocs/HLC08-inf-1-E.pdf
[106] http://www.imf.org/external/pubs/ft/fandd/2008/03/helbling.htm
[107] http://www.imf.org/external/np/speeches/2008/050808.htm

production and be compatible with a sustainable development at the economic, social and environmental levels.

3) The other US and EU responsibilities in the present hunger riots

Beyond the huge impact of the US and EU biofuels programmes, of their agricultural trade deficit and even more of their food trade deficit, particularly in cereals and oilseeds for the EU, they are at the origin of deeper causes of the explosion of world agricultural prices and hunger riots in DCs. It would be too long to make the list and we will focus on some of the main causes.

a) It is the US and EU which have devised jointly the WTO Agreement on Agriculture (AoA) which has ruined DCs agricultures

In front of exploding food prices, the IMF, World Bank, WTO and OECD conclude that it is all the more pressing to finalize the Doha Round so as to liberalize more agricultural trade. Actually it is the reduction of the import protection of DCs agriculture together with the massive dumping of US and EU agricultural exports which have increased DCs food dependency after having ruined their farmers and agri-food industries.

The US and EU are not only pressuring DCs to go on reducing their import protection on agricultural and non agricultural products, but the AoA has allowed them to continue a massive dumping of their agricultural exports through two mechanisms:

i) By the definition of dumping and allowed subsidies: whereas, for the man in the street, there is dumping whenever a product is exported at a price lower than the average cost of production of the exporting country, for the WTO there is no dumping as long as exports are made at the domestic price, even when it is lower than the average national production cost. This has been the main reason of the CAP (Common Agricultural Policy) reforms since 1992: bringing domestic agricultural prices closer to world prices has allowed the EU to export without or with low export subsidies, but with massive domestic subsidies allowed by the WTO. This has also been the main reason of the Farm Bills since 1996: lowering domestic prices of 'grains' to eliminate foreign competitors on the world market and compensating these low prices by payments (marketing loans, countercyclical payments) covering the gap with guaranteed prices.

ii) By the violation of the AoA rules and without taking into account the precedents of the WTO Appellate Body's rulings: selling at a price lower than national production cost is only possible in rich countries which compensate these low prices with domestic subsidies 'decoupled' from the current level of production or price and permitted by the WTO. Today the main source of the US and EU massive agricultural dumping lies in the domestic subsidies to the exported products because the specific export subsidies have been much lowered since the 1990s in the EU and have never been large in the US. However the WTO Appellate Body has ruled several times since 2001 that dumping should take into account the domestic subsidies to the exported products and that the so-called 'decoupled' subsidies are not really such. But the WTO does not consider its Appellate Body's rulings as precedents.

Thus, on US total cotton subsidies of $5.1 billion in 2005, $4.8 billion were domestic subsidies, of which $4.5 billion to farmers and $0.3 billion to mills. As 73.5% of cotton has been exported, $3.3 billion were domestic subsidies to farmers for the exported cotton, that is 93% of the $3.6 billion in total subsidies to the exported cotton, the exporters having received $253 million. Thus, if the US has been condemned by the WTO to eliminate its formal export subsidies in August 2006, it has maintained 93% of its subsidies to farmers for their exported

cotton under the pretext that they were domestic subsidies[108]. A similar observation can be made for other US and EU exported products.

Consequently the persistence of a low price of cotton until November 2007 explains partially the recent food riots in West Africa, together with the massive dumping of the EU and US exports of basic staples (wheat, sugar, rice, oilseeds, dairy and poultry meat). Indeed they were constrained to import them because they had been forced to lower considerably their import protection under the pressures of the IMF and World Bank, which are the 'military wing' of the EU and US which control together the majority of their capital.

If the EU has reduced by 90% its export subsidies on cereals from 1992 to 2002, taking into account the domestic subsidies to the exported cereals show that the subsidy per exported tonne has actually increased by 20% as the exported volume had been halved[109]. In the same way the EU has granted €329 million per year from 1995 to 2000 in subsidies to exported poultry, ¾ of which were domestic subsidies. 62% of the average €462 million granted yearly in the same period to pig meat exports were domestic subsidies. This has also been the case for 38% of the €2.7 billion per year in subsidies to the exported dairy produce and for 52% of the €1.8 billion per year of subsidies to the exported bovine meat.

For the US, IATP has shown that the average dumping rate from 1997 to 2003 has been of 11.8% on soybean, 19.2% on corn and rice and 37% on wheat. And, as feedstuffs account for more than 50% of the production cost of hog and poultry, the US highly subsidized feed grains have implied dumping prices for the US exported pig meat and poultry, and to a lesser degree also for the exported bovine meat and dairy produce. The US share in world exports has been of 36% for poultry in 2005, of 27% for pig meat in 2007 and of 12% for bovine meat in 2003, all these exports having been boosted by the dollar depreciation, another subtle type of dumping.

We should add that formal exports subsidies have not been forbidden by WTO but only subjected to a 36% reduction from 1995 to 2000 in relation to their 1986-90 level, and they can still be used as long as a new AoA is not adopted in the Doha Round negotiations;

iii) The EU and US did not notify to the WTO their feed subsidies in the category of those subjected to reduction: the EU has 'forgotten' to notify in this category ("amber box") about €10 billion per year since 1995. The US has also forgotten to notify in that category its direct payments to grains used as feedstuffs for about $2 billion per year and its total subsides to feed grains have jumped from $3.8 billion in 2002 to $7.7 billion in 2005.

b) The AoA as well as the CAP and Farm Bill have consecrated the progressive deregulation of national and international agricultural markets, the "free play of market forces" being supposed to optimize prices for all actors, and first for consumers. The largest losers are the small farmers, particularly in DCs since they did not benefit, as their Northern colleagues, of massive subsidies compensating the past drop in prices, the reason why they still account for about ¾ of the 854 million of the chronic undernourished population.

Actually the only winners have been the agri-food corporations more and more globalized which have seen a large surge in profits, particularly in the recent explosion of agricultural

[108] J. Berthelot, *Solidarité's comments on the revised draft modalities for agriculture*, Solidarité, 21 February 2008.
[109] See J. Berthelot's papers on Solidarité website: http://solidarite.asso.fr.

prices. Thus Cargill profits have jumped by 86% in the November 2007-February 2008 period in relation to the same period of the previous 12 months[110]; those of ADM (Archer Daniel Midland), the first corn ethanol producer in the US and one large biodiesel producer in the EU, have jumped by 65% from 2006 to 2007[111]; those of Bunge, which produces also biodiesel in the EU, have skyrocketed by 750% over December 2007-March 2008 in relation to the previous 12 months and its president has stated: "*This is a unique period for global agribusiness and food industry… An environment of high and volatile prices presents however some challenges… In that environment, it is essential to have an efficient risk management and a management of global business which mitigates exposure in any region, bringing at the same time the capacity to navigate market relocations. What is also essential is an efficient management of working capital*"[112].

c) The EU and US heaviest responsibility in the recent, and even more future, explosion of hunger riots lies in their bilateral free-trade agreements imposed to DCs, notably NAFTA imposed to Mexico by the US and Canada since 1994 and the EPAs (Economic Partnership Agreements) imposed by the EU to ACP countries at the end of 2007. US corn exports to Mexico, where tortilla is the basic staple, have jumped from 0.9 Mt in 1991-93[113] to 8.8 Mt in 2006[114]. Above all the EPAs represent the fuse which will trigger in the medium run a bomb whose explosion will provoke in Sub-Saharan Africa hunger riots of such a magnitude that the recent ones would appear trivial.

D – Has Brazil any responsibility in the explosion of world agricultural prices?

According to Anne Denis from the daily newspaper Les Echos of 18 April 2008, "*Brazil, which has become in few years number two of bioethanol (after the United States) owing to an ultra voluntarist policy, is particularly blamed. All the more that, because of its exports, it is one of the large beneficiaries of the explosion in world agricultural prices. Yet President Lula has defended his policy, at the occasion of a FAO regional conference which is taking place in Brasilia. « The true crime against mankind would be to reject biofuels a priori, and to leave in dependency and insecurity the countries already strangled by the lack of food and energy », he replied, challenging « the negative impact of increased oil price on production costs » and that « of subsidies and protectionism in the agricultural sector »*"[115].

What should we think of it? We have already underlined that, being extracted from sugarcane, Brazil bioethanol has nothing to do with the explosion of global cereals prices, not even of sugar price which has actually fallen since 2006. For that matter this does not justify Brazil production of sugarcane ethanol and soybean oil biodiesel.

A well documented report by Camila Moreno and Anuradha Mittal show that "*Biofuels… depend upon the massive expansion of industrial monocultures and GMOs in the industrial agriculture system controlled by large agribusiness corporations… A drive through the countryside reveals how the expansion of agribusiness is turning millions of hectares of formerly natural ecosystems, including the Cerrado (grasslands) and the Amazon, into one major monoculture… The expansion of monocultures under a corporate-controlled industrial agricultural system is seen as the main driving force determining access to and control over*

[110] http://www.cargill.com/news/news_releases/080414_earnings.htm
[111] http://www.admworld.com/pdf/adm_2007_annual_report_que.pdf
[112] http://phx.corporate-ir.net/phoenix.zhtml?c=130024&p=irol-newsArticle&ID=1134307&highlight=
[113] http://www.ers.usda.gov/publications/wrs0701/wrs0701.pdf
[114] http://www.ers.usda.gov/Data/Feedgrains/StandardReports/YBtable22.htm
[115] http://www.lesechos.fr/info/inter/4716963.htm

common natural resources (land, water, forests, biodiversity, oil, gas), and is at the root of nearly all socio-environmental conflicts in Brazil—as is the case throughout the rest of Latin America"[116].

In other words, even if the sugarcane bioethanol is not at the origin of the explosion in global cereals prices – but the more recent expansion of soybean biodiesel has contributed to soaring oilseeds prices –, the rapid expansion of industrial agriculture induced by bioethanol is marginalizing small farmers and putting a brake on agrarian reform, increasing at the same time the cost of food for the Brazilian population[117].

Beyond its negative social and ecological impacts, President Lula's global crusade to promote biofuels[118] can be explained also by their considerable knock-on effect on Brazil's economy: huge increase of agribusiness profits and of food and ethanol exports, with an amazing agricultural trade surplus of $49.7 billion in 2007 ($58.4 billion of exports and $8.7 billion of imports)[119] against $38.4 billion in 2005 and $37 billion in 2006[120]. Despite Lula's efforts to demonstrate that biofuels expansion has nothing to do with the explosion of world agricultural prices, Brazil is the first beneficiary of that expansion, much ahead the US which has registered an agricultural trade surplus of $11.9 billion in 2007, even if it expected to climb at $24 billion in 2008.

However, in so doing, Brazil is betraying DCs, selling its leadership among them for a lentils meal since, in this context of soaring agricultural prices so profitable to its exports, Brazil wants to finalize the Doha Round at any cost, since it would open new markets, particularly in other DCs to which the majority of its agricultural exports have been directed since 2004. In full contradiction with the bulk of DCs' objective prioritizing protection of domestic markets.

Yet this Brazil's headlong flight in developing agribusiness for exports, largely controlled by foreign multinationals, would entail considerable ecological damages, at a time when two Brazilian agro-meteorologists of Embrapa and the University of Campinas have appraised the likely impact of global warming on Brazil capability to produce food. A 5.8 degrees increase in the century would halve Brazil potential land area apt to grow coffee, rice, beans, corn and soybean and a 3 degrees increase would reduce it by one third[121]. And this at the same time as Brazil and Argentine reserves of cultivable lands are considered necessary to feed the 9.3 billion world population expected in 2050.

III – The role of financial speculation on agricultural commodities in the explosion of world agricultural prices

Clearly the explosion by 120% to 190% in two years, from January 2006 to March-April 2008, in the prices of cereals and oilseeds cannot be explained only by the 19% fall in the world cereals stocks, by the 11% fall in the oilseeds stocks and by the 12% fall in the vegetable oils stocks – notably as a result of their use for biofuels – but by an amazing financial speculation triggered by the biofuels boom and which has been accompanied by a commercial speculation and States interventions to secure national food needs.

[116] http://oaklandinstitute.org/pdfs/biofuels_report.pdf
[117] http://www1.folha.uol.com.br/folha/dinheiro/ult91u401397.shtml
[118] Jean-Pierre Langellier, *La croisade du Brésil pour l'éthanol*, Le Monde des 11-12 mai 2008.
[119] http://www.agenciabrasil.gov.br/noticias/2007/12/13/materia.2007-12-13.3390134025/view
[120] http://www.iea.sp.gov.br/out/verTexto.php?codTexto=7019
[121] http://www.unicamp.br/unicamp/unicamp_hoje/ju/fevereiro2005/ju278pag12.html

1) The major role of financial speculation in the explosion of world agricultural prices
It has magnified considerably the fluctuations and has leant on self-fulfilling expectations.

For the IMF "*In financial markets, commodities are now an established part of the wider class of alternative assets… the favorable liquidity conditions associated with low interest rates also tend to increase both asset demand for commodities (partly because low-yielding treasury bills are less attractive) and incentives for holding commodity inventories by lowering holding costs, everything else being equal.The U.S. dollar exchange rate affects commodity prices because most commodities—in particular, crude oil, precious metals, industrial metals, and grains such as wheat and corn—are priced in U.S. dollars. The effective dollar depreciation seen over the past few years therefore has made commodities less expensive for consumers outside the dollar area, thereby increasing the demand for the commodities. On the supply side, the declining profits in local currency for producers outside the dollar area have put price pressures on the commodities. A decline in the effective value of the dollar also reduces the returns on dollar-denominated financial assets in foreign currencies, which can make commodities a more attractive class of "alternative assets" to foreign investors*"[122].

Alain Faujas and Claire Gatinois give a good example: "*Rice price has jumped by 31% in a single day, Thursday the 27 March 2008, from $580 to $760, rice stocks having fallen at their trough since 1976. India, Egypt, Vietnam and Cambodia have announced they were suspending rice exports at the same time when the Philippines were looking for 5000,000 tonnes desperately on the market. Speculators have jumped on the occasion, as they have been doing all the time for wheat, gold, oil or pork carcasses the quotations of which are fluctuating more and more suddenly*"[123].

How to explain also otherwise than by speculation that, on the Minneapolis futures markets for grains, the HRW wheat price with a high protein content has soared itself by 29% the 25 February 2008 in relation to the previous day ?[124]

According to the New York Times of 22 April 2008, "*Prices of broad commodity indexes have climbed as much as 40 percent in the last year and grain prices have gained even more — about 65 percent for corn, 91 percent for soybeans and more than 100 percent for some types of wheat. This price boom has attracted a torrent of new investment from Wall Street, estimated to be as much as $300 billion*"[125].

The Commodity Futures Trading Commission monitoring US futures "*found the Wall Street funds indexed on commodities… have a much heavy concentration on agricultural futures than many would think of. The Commission has found that the Wall Street funds control a fifth to a half of the futures contracts for commodities like corn, wheat and live cattle on Chicago, Kansas City and New York exchanges. On the Chicago exchanges, for example, the funds make up 47 percent of long-term contracts for live hog futures, 40 percent in wheat, 36 percent in live cattle and 21 percent in corn. "These are jaw-dropping numbers," said Dan Basse, president of AgResources, an agricultural research firm in Chicago*"[126].

[122] http://www.imf.org/external/pubs/ft/fandd/fre/2008/03/pdf/helbling.pdf
[123] http://www.lemonde.fr/economie/article/2008/03/28/la-speculation-chamboule-les-prix-des-matieres-premieres_1028439_3234.html
[124] http://www.farmpolicy.com/?p=727#more-727
[125] http://www.nytimes.com/2008/04/22/business/22commodity.html?_r=2&th&emc=th&oref=slogin&oref=slogin
[126] http://www.nytimes.com/2007/01/19/business/19futures.html

For Karel Vereycken and Bertrand Buisson "*The official version generally exposed in newspapers… consists in blaming Chinese and Indians, too many and who have become fond of cereals, and climate change responsible of bad harvests… The vultures of speculation, associated to the main world financial interests, have first organized a slump in prices on agricultural markets, thus creating a shortage situation. In a second time – today – they are rushing on these products of those markets to bull. And, at the same time, they are promoting biofuels, implying a withdrawal of cereals, rapeseed, soybean, sugar beet and sugarcane from the food sector, in order to accelerate bullish expectations under more or less ecological pretexts*"[127].

Syed, the chief executive of Axiom Funds, the world's best-performing investor in commodity hedge funds this year, "*says he wants to increase his investments in agriculture funds as record oil prices spur demand for biofuels. "We don't see this as a fad," Syed said. "The supply-demand balance is in favor of higher agriculture prices in the coming years*"[128].

For Patrick Collinson and Paul Bicknell, "*Agriculture is the latest "asset class" to excite investors, who are piling into commodities such as wheat, corn and soya beans, as climate change and Asia's emerging growing appetite for meat and grain sends prices soaring* "[129]. And they specify: "*Exchange Traded Funds are a cheap way for small investors to begin commodity trading. They can be bought and sold just like any other share and you can ask any stockbroker to buy on your behalf. You can opt for an ETF that tracks a basket of commodities, or buy individual ones, such as wheat and corn… Sarasin… is launching its AgriSar fund on Monday, investing in agriculture and associated industries and sectors*".

For Henry Boucher, manager of the AgriSar fund, "*Over the last 18 months we have had some very satisfactory performance from the agriculture sub-theme in our global equity investment portfolios. We are convinced that there are long-term attractions in having exposure to this area as an asset class in its own right. The best way to play the compelling demand /supply characteristics of agriculture is not simply through speculation in commodity prices or buying illiquid land, but rather via building a portfolio of long-term investments that will benefit from this powerful and prolonged theme… Sarasin is committing a team of experienced investment professionals to the management of the new fund led by Henry Boucher and this will be supported by the research available from Sarasin's ultimate parent Rabobank, the world's largest Agri-bank*"[130].

And he adds: "*The fund will have a portfolio of approximately 50 to 60 stocks across the whole supply chain within the agricultural theme. This includes fertilizer, pest control and seed inputs, irrigation, mechanization, storage, processing and distribution... The fund can invest in the actual agricultural commodities themselves, but this exposure is expected to be no more than 15 per cent. This is because the real long-term growth story is in the supply chain leading up to production*"[131].

---

[127] http://www.solidariteetprogres.org/article-imprim.php3?id_article=3288

[128] http://www.iht.com/articles/2007/08/21/bloomberg/bxfund.php?page=1

[129] http://www.guardian.co.uk/money/2008/mar/15/moneyinvestments.alternativeinvestments

[130] http://www.sarasin.co.uk/internet/ieuk/about_us_media_relations_news_ieuk?&reference=71399&checksum=EDAB2D8BFD2DAD5D205E6C8C035B448B

[131] http://www.independent.co.uk/money/invest-save/the-analyst-food-is-a-commodity-too-so-tuck-in-799261.html

According to Dominique Baillard, "*The volume of capital managed by the quoted investment funds… on European agricultural commodities has increased fivefold. It has gone from 156 million dollars… to 911 million… according to Barcap… The outstanding capital on the US agricultural markets has jumped even higher: it has been multiplied by seven between the first and the last trimester of 2007*"[132].

Barclays has launched in Singapour and Hong-Kong an offer to subscribe in May 2008 to its "Global Agriculture Delta Fund" which "*aims to provide a unique yet transparent agriculture investment opportunity for investors to gain exposure to the performance of the Rogers International Commodity Index… [which] represents the value of 20 agricultural commodities futures contracts including grains, live cattle, cotton and lumber*"[133].

William Pfaff wrote the 17 April 2008: "*Oddly little has been said about the role of speculation in the rise in commodity prices generally and specifically in food… The argument sometimes is made that this speculation is unimportant because the futures speculators will never take delivery; but this is precisely the problem. It is why this speculation is highly destructive of the true market. Futures purchases of agricultural commodities classically have been the means by which a limited number of traders stabilized future commodity prices and enabled farmers to finance themselves through future sales. Speculative purchases have no other purpose than to make money for the speculators, who hold their contracts to drive up current prices with the intention not of selling the commodities on the real future market, but of unloading their holdings onto an artificially inflated market, at the expense of the ultimate consumer*".

Financial speculation has become a self-evident behaviour, practiced without knowing it by all small savers detaining shares of collective funds managed by their bank or insurance company. Therefore it is not surprising that some banks or insurance companies are praising the high profitability of investments linked to the explosion of world agricultural prices. It is the case of the Belgian bank KBC with its publicity campaign in the following terms: "*Take advantage of the soaring food prices !*" in order to get subscribers for its life-insurance investment fund "KBC-Life MI Security Food Prices 3" which invests on six agricultural commodities. The advertisement showed as an *"opportunity"* the *"shortage in water and cultivable agricultural lands"* with the consequence of *"a shortage of food products and soaring food prices*"[134]. Jean-Pierre Stroobants quotes rightly enough a columnist of Trends-Tendances for whom "*When we criticize KBC, we are criticizing ourselves, he writes. Have you ever thought of the fact that (...) we are demanding to the managers of our collective funds to give us the best possible return?*"[135].

This implication of hedge funds on the futures markets of agricultural commodities has the result that "*Today's crop prices are not just much higher, they also are much more volatile. For example, a widely used measure of volatility showed that traders in March expected wheat prices to swing up or down by more than 72 percent in the coming year, three times the*

[132] Dominique Baillard, *Comment le marché mondial des céréales s'est emballé*, Le Monde Diplomatique, mai 2008.

[133] http://www.barcap.com/sites/v/index.jsp?vgnextoid=eec76779ae6c9110VgnVCM1000001413410aRCRD&vgnextchannel=1c6c15cd3f4f8010VgnVCM1000002581c50aRCRD

[134] http://www.lalibre.be/index.php?view=article&art_id=419336

[135] http://www.lemonde.fr/opinions/article/2008/05/12/un-produit-financier-qui-derange-par-jean-pierre-stroobants_1043787_3232.html

average volatility for that month and the highest level since at least 1980. The price swing expected in March for soy beans was three times its monthly average, and the expected volatility in corn prices was twice its monthly average. Those wild swings in expected prices are damaging the mechanisms — like futures contracts and options — that in the past have cushioned the jolts of farming"[136].

Fred Grieder, an American farmer who runs a 600 hectares farm in Illinois, explains that "*Futures, for example, are less reliable. They work as a hedge only if they fall due at a price that roughly matches prices in the cash market, where the grain is actually sold. Increasingly… grain futures are expiring at prices well above the cash-market price… Farmers or elevator owners wind up owing more on their futures hedge than the crops are worth in the cash market. Such anomalies create uncertainty about which price accurately reflects supply and demand — a critical issue, since the C.B.O.T. futures price is the benchmark for grain prices around the world*"[137].

A New York Times article of January 2007 had already acknowledged that "*Volatility in the corn markets has caused the Chicago Board of Trade to increase the risk capital required to buy or sell corn futures. Last week the deposit required to trade was elevated to $1,215 a contract, up from $338 last January*"[138].

The same statement was made in France in 2006: "*Michel Deloingce, president of the social commission of the National Association of French Millers, observed after the rise of bread price in 2006 – already partially due to soaring world wheat prices – that « the prices volatility is from now on increased by financial markets and particularly in our country by the MATIF (futures market of financial instruments), on which operators, who have sometimes nothing to do with the experience of the profession, indulge in speculation on futures prices of commodities»*"[139].

Naturally the free-trade advocates, particularly of financial markets, deny the key role of financial speculation in the explosion of agricultural prices, including Philippe Chalmin when, to the question "*Do you think that the present explosion of commodities prices is due to speculations in futures markets?*", he answered: "*A little, but this is not the most determining factor. Besides I observe that there is no futures market for products such as rice and agricultural produce which have exploded in the same way*"[140]. Recognized specialist of world agricultural markets, he should not ignore that paddy rice is quoted on the Chicago Board of Trade (CBOT) through options where it had reached its highest price the 21 April 2008, at 829 $/t for delivery in May (paddy rice is quoted in short hundredweight – of 45.36 kg –, rice representing 65% of the paddy weight)[141].

[136] http://www.nytimes.com/2008/04/22/business/22commodity.html?_r=2&th&emc=th&oref=slogin&oref=slogin
[137] http://www.nytimes.com/2008/04/22/business/22commodity.html?_r=2&th&emc=th&oref=slogin&oref=slogin
[138] http://www.nytimes.com/2007/01/19/business/19futures.html
[139] http://www.solidariteetprogres.org/article-imprim.php3?id_article=3288
[140] http://www.lemonde.fr/archives/article/2008/04/22/philippe-chalmin-le-defi-majeur-de-la-planete-au-xxie-siecle-sera-alimentaire_1036889_0.html
[141] http://futures.tradingcharts.com/marketquotes/index.php3?market=RR

Source : http://www.investmenttools.com/futures/soy/welcome_to_the_page_about_rice.htm
Rice Futures - The Blue line is a Donchian channel, red line is a 5 day exponential average, green line is a 20 day exponential average. Vertical green bars MACD (Moving average convergence divergence) 5 and 20.

Philippe Chalmin ignores also that some dairy products (class III milk and butter) are traded as well at the CBOT, also through options.

Source : http://www.dairy.nu/quotes.asp

2) Commercial speculation and hoarding of farmers and consumers

Besides speculation on financial markets, one cannot underscore the impact of storage and hoarding by food chain operators: traders who import and export, domestic traders, farmers themselves and even consumers, all of them trying to secure the better price in a context of soaring prices. Traders exporting are not always the wicked people, particularly in the context where the dollar is depreciating largely against other currencies and where most food products are traded in dollars, even rice between Asian countries. Thus the US dollar has gone from 40.77 Thai bahts in January 2006 to 31 baths in mid-March 2008. And some Thai exporters, who have sold through forward contracts, are complaining of the hoarding by rice millers and farmers, not too hurry to sell their rice in the expectation of higher prices, so that the exporters must sometimes buy the rice at a higher price than their forward export price[142].

3) Government interventions to restrict exports or to import at any price

The recent analysis of the explosion in world food prices made by Ronald Trostle of USDA gives a comprehensive list of the interventions of different countries in an attempt to prioritize the food security of their citizens[143].

[142] http://www.irri.org/publications/today/pdfs/7-2/RT_Troubling_trade.pdf
[143] http://www.ers.usda.gov/Publications/WRS0801/WRS0801.pdf

4) Speculation on agricultural lands

Another perverse effect of the explosion in world agricultural prices is the parallel explosion in agricultural lands prices. Thus, in the United Kingdom "*The value of farmland rose by 28 per cent during the second half of 2007… [and] by more than 10 per cent in the first quarter of 2008*"[144]. According to USDA the average price of arable lands has increased by 13% in the USA in 2007 and should rise by 15% more in 2008.

5) Conclusion: as all the other bubbles which have taken place on the financial or real estate markets in the last 20 years, the on-going one on agricultural commodities will also end up bursting. The more so as the elasticity of food demand is very low so that a slight increase in world supply would trigger a collapse in prices. Already the HRW wheat price has collapsed by 43.3% between the last week of February and the second week of May 2008 and the SRW by 33%.

The new report "OECD-FAO Agricultural Outlook 2008-2017, Highlights" confirm that "*prices will gradually come down because of the transitory nature of some of the factors that are behind the recent hikes… These conditions are not new; they have happened in the past and prices have come down once more normal conditions prevail and supply responds over time. The Outlook sees no reason to believe that this will not recur over the next few years*"[145].

But the higher cost of production and transport of agricultural and food products linked to the soaring oil price will maintain the agricultural prices at levels significantly higher than those having prevailed before 2006. What is also confirmed by the joint FAO-OECD report: "*Once they have fallen from their current peaks, however, prices will remain at higher average levels over the medium term than in the past decade. But the underlying forces that drive agricultural product supply (by and large productivity gains) will eventually outweigh the forces that determine stronger demand, both for food and feed as well as for industrial demand, most notably for biofuel production. Consequently, prices will resume their decline in real terms, though possibly not by quite as much as in the past… When the average for 2008 to 2017 is compared with that over 1998 to 2007, beef and pork prices may be some 20% higher; raw and white sugar around 30%; wheat, maize and skim milk powder 40 to 60%; butter and oilseeds more than 60% and vegetable oils over 80%. Over the Outlook period, prices will resume their decline in real terms, albeit at a slower rate*".

Therefore only rebuilding agricultural policies on food sovereignty without dumping will allow to overcome the challenges of a sustainable agricultural development in the long run at the economic, social and environmental levels.

[144] http://www.independent.co.uk/news/uk/this-britain/fields-of-gold-investors-discover-lucrative-haven-in-britains-farmland-810376.html

[145] http://www.fao.org/es/esc/common/ecg/550/en/AgOut2017E.pdf