Summary of Critical analysis of the causes of the explosion in world agricultural prices[1]

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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 higher production costs, knowing that some causes have had short term effects while others correspond to long term trends.

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) If the increased consumption of food products, notably of animal products and therefore of 'grains' (cereals and oilseeds), is clearly linked to the rapid rise in the living standard of emerging countries such as China and India, this is a trend which has been going on for many years and which cannot account for the recent explosion in world agricultural prices.

The world population growth in the long run – from 6.6 billion in 2007 to 9.3 billion in 2050, which will occur only in developing countries (DCs) – cannot 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 are still suffering from chronic under nutrition and more than 2 billion from malnutrition (deficit in proteins, vitamins or trace elements).

c) More recently the massive financial speculation on agricultural commodities (and non agricultural ones, of which oil) linked to the collapse of securities and the dollar depreciation.

d) But also the speculation by traders and consumers expecting the continuation of prices hikes, and governmental imports in countries such as the Philippines in order to discourage the speculation of national traders.

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 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.

b) The explosion of oil prices which has raised the cost of agricultural inputs and transport charges and which has justified the political decisions to accelerate the production of biofuels.

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[1] Summary of a paper of 38 pages with the same title on which you can check the bibliography, graphs and tables and that you can download at: http://www.tradeobservatory.org/library.cfm?refID=102429

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 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 rate. Actually the US and EU bear almost all the responsibility.

1) China

Its agricultural trade balance has maintained a surplus of $4 to 5 billion from 1995 to 2003, has registered a deficit in 2004 ($4.9 billion) and 2005 ($1.5 billion) and again a surplus of around $7 billion in 2006-07. And this despite net imports of 28 million tons (Mt) of oilseeds and 8.5 Mt of vegetable oils in 2006-07.

Has China contributed to the biofuels boom which has fostered the explosion of world grains prices? 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, it is not either responsible for the explosion of vegetable oils world prices.

China's agricultural added value has risen by 4.5% per year from 2003 to 2007. However 154 million Chinese were still chronically undernourished in 2002-04.

Therefore a negative impact of China on the recent explosion of world agricultural prices should be discarded, even if it would have an increased deficit in its agricultural trade balance in the long run.

China has become aware of those challenges: agricultural investments have surged by 31% in 2007 and agricultural subsidies would double in 2008, to $79.2 billion, in relation to 2004.

2) India

It has remained a net exporter of agricultural products (including fish) ever since 1995, for more than $5 billion a year, and cereals account for about 20% of exports: rice above all (about 5 Mt/year) but also wheat from 2001-02 to 2005-06. India is also a net exporter of meat and dairy.

As for oilseeds, if India is a large importer of vegetable oils (5.4 Mt/year), it is exporting almost as much of oilcakes (5.2 Mt in 2007-08). As the price of soybean meal exceeds that of soybean oil by 1/3, India has kept a net surplus in its oilseeds trade.

All in all, the surplus of India's agricultural trade balance has likely increased in 2007-08.

India and biofuels: it has become the 4th producer of bioethanol with 1.9 billion litres and a processing capacity of 2.9 billion litres. It intends also to cover 20% of its needs in diesel in 2011-12 with biodiesel from the non edible oil of jatropha cultivated on arid lands. However this

programme will not succeed because the government has established a biodiesel price lower than the production cost of processors who themselves pay a non remunerative price to farmers. India's finances Minister has stated the 26 March 2008 that "*As citizens of one world, we ought to be concerned about the foolishness of growing food and converting it into fuel*". Which lets foresee a brake into governmental support to biofuels.

However Indian agricultural production is much less dynamic than that of China and its agricultural added value has increased by only 2.7% a year from 2003 to 2007. Despite the fact that India is a net exporter of cereals and that its GDP growth rate has exceeded 8% since 2004, it had still 212 million of chronic undernourished people in 2002-04 and the number has increased by 10 million since 1995-97.

All in all, if it would be more difficult for India than for China to face its food needs in the long run, it bears no responsibility in the recent explosion of world agricultural prices.

3) The US, corn ethanol and soybean diesel

The US shoulders undoubtedly the main responsibility for the explosion of world agricultural prices and hunger riots because of its crazy objectives 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.

Corn production for ethanol has jumped from 41 Mt in 2005-06 to 79 Mt in 2007-08, that is from 14.4% of production to 23.7% and should reach 33.2% in 2015-16 to fulfil the Congress' mandate. US economists estimate that this would increase corn prices even more and would imply larger subsidies to ethanol processors in order to make a profit.

Links between the rise in corn prices induced by ethanol and the price of the other grains: the surge in corn prices in 2006-07 has fostered a large increase in the acreage sown in corn in 2007, to the detriment of the acreage sown in wheat and soybean so that their prices have jumped by a higher rate than that of corn, the more so as their production costs are lower.

It is clear that, with 79 Mt of corn for ethanol in 2007-08 – that is 23.7% of the harvest, 24% more than corn for exports and 82.5% of corn global exports –, and because US FOB prices of grains are making the world prices, the US is the first responsible for the explosion in the world prices of corn and the other grains, given their substitution effects.

The responsibility of the US corn ethanol in the explosion of the world prices of grains is all the less questionable that Brazil's ethanol, which production follows on the heels the level of the US ethanol, is produced from sugarcane and because the world price of sugar has remained very low in 2007 and was still lower in February 2008 than its average 2006 level.

The US is all the more hanging a threat on the higher level of future grains prices that it does not have any reason to stop the expansion of biofuels which has been so beneficial to its agricultural economy: farmers' income has surged by 48% in 2007 and would rise again by 4% in 2008, and the agricultural trade surplus has jumped from $4.6 billion in 2006 to $11.9 billion in 2007 and would jump again to $24.5 billion in 2008.

The more so as the three candidates to the US presidency are supporting biofuels, particularly the candidate the most likely to win, Barak Obama, given that the state of Illinois, of which he is a Senator to the US Congress, is ranking second for the production of corn and ethanol.

2) The EU, bioethanol from cereals and sugarbeet and biodiesel from rapeseed

The EU claims its responsibility to feed the world and points its finger at China and India as bearing a large responsibility in the explosion of world agricultural prices! This posture is laughable for the following reasons:

a) The EU agricultural trade balance has always been in deficit: by $21.2 billion (€16.9 billion) with fish products in 2006 and $3.9 billion (€3.1 billion) without them.

b) The EU-27 is the 1st net importer of oilseed products, far ahead China: 17 Mt of oilseeds (of which 15.3 Mt of soybean), 27 Mt of cakes (of which 22.1 Mt of soybean) and 8.2 Mt of vegetable oils (of which 1.4 Mt of soybean) in 2006-07.

c) The EU-27 is turning in 2007-08 the fifth net importer of cereals, at 10.1 Mt: it would remain a net exporter of wheat for 2.5 Mt but its net imports of coarse grains would reach 11.6 Mt, plus 1 Mt of rice.

d) The EU biofuels is also responsible for the explosion of world agricultural prices: the EU has the objective of incorporating 5.75% of biofuels in transport fuels for 2010 and 10% for 2020.

i) Biodiesel accounted for 80% of EU biofuels in 2006 (4.9 Mt against 1.2 Mt for bioethanol) and the production capacity has jumped at 10.2 Mt in 2007, which would allow to reach the 10% objective in advance. The EU has produced 77% of the global biodiesel in 2006, far ahead of the US (0.8 Mt). In 2006/07, biodiesel has consumed 64 % of the rapeseed oil used in the EU-25 and the trade balance of rapeseed grains is in deficit. The EU imports 45% of its needs in vegetable oils and its imports of all vegetable oils and fats have doubled from 2000 (5.2 Mt) to 2006 (10 Mt). This has fostered a rise in the price of rapeseed oil higher than that of other vegetable oils.

ii) The EU production of bioethanol has reached 1.77 billion litres in 2007, at the 4th rank after the US (24.6 billion litres), Brazil (19 billion litres) and China (1.84 billion litres). As the EU consumption of biodiesel has been of 2.7 billion litres in 2007, imports from Brazil have reached 1 billion litres, despite an import duty of $0.26 per litre. The 1.560 billion litres of EU bioethanol in 2006 have been produced from 1.4 Mt of wheat, 1.1 Mt of barley, 0.5 Mt of corn and 0.8 Mt of sugarbeet. But the objective for 2012 to reach 10.1 billion litres of bioethanol would imply 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) The criticisms of EU biofuels: those of the EU civil society demanding a moratorium on biofuels production and imports and those of public authorities – Gordon Brown, European Parliament, the EU Commissioneer to the environment Stavros Dimas, OECD, the World Bank, IMF and FAO – have led the European Commission to propose restrictions on imports

of vegetable oils from countries where their production is detrimental to the environment, a proposal that the EU Council should adopt the 7 May 2008.

But the European Commission has rejected the 14 April 2008 Jean Ziegler's statement that the production of biofuels is "*a crime against mankind*", arguing that questioning that component of its programme to fight climate change would also challenge its objective to reduce by 20% in 2020 the emission of greenhouse gas. The Commission follows the biofuels industry which denies that they may have any impact on world prices.

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

a) The US and EU have devised between themselves the WTO Agreement on Agriculture (AoA) which has ruined most DCs' farmers

In front of the present explosion of food prices, the IMF, World Bank and WTO 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 in 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: 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 rulings by the WTO Appellate Body: selling at a price lower than 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 cotton. 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.

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 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.

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. 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 prices. 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.

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 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 to 8.8 Mt in 2006. 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.

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

The explosion by 120% to 180% in two years, from January 2006 to February 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 which has magnified considerably the fluctuations and has leant on self-fulfilling expectations. We find again here the recurrent phenomenon of speculative bubbles having taken place on stock markets or real estate markets in several countries in the last 20 years. And, as these bubbles have ended blowing up, the present one on agricultural commodities will have the same fate, the more so as the elasticity of food demand is very low so that a slight increase in world supply would suffice to trigger a collapse in prices.

How to explain otherwise than by speculation the surge in a single day of the rice price by 31% the 27 March 2008, from $580 to $760 per tonne, or by 29% of the HRW wheat price the 25 February 2008 ?

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".

The Commodity Futures Trading Commission, which monitors the US futures, "*found 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*".

This involvement of hedge funds in the agricultural commodities futures markets has had the effect that "*today's crop prices are not just much higher, they also are much more volatile. For example… traders in March expected wheat prices to swing up or down by more than 72 percent in the coming year, three times the average volatility for that month and the highest level since at least 1980… 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*".

Besides the speculation on financial markets, there is also that of other operators, among which farmers and exporters, who have to face also the appreciation of their national currency against the dollar. Indeed agricultural trade is essentially made in US dollars, including rice between Asian countries. Thus the dollar has dropped from 40.77 Thai bahts in January 2006 to 31 baths in the mid-March 2008 and exporters who have sold for future delivery are complaining that rice growers and mills are hoarding stocks, expecting new surges in prices, so that eventually they must often buy the rice at a higher price that their selling price.

Finally another perverse effect of the explosion in agricultural prices is the parallel surge in agricultural land prices. 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*". According to USDA the average price of arable land rose by 13% in 2007 and is likely to go up by a further 15% in 2008.