

Ploughing through the meanders in  
**Food Speculation**



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# Ploughing through the meanders in **Food Speculation**

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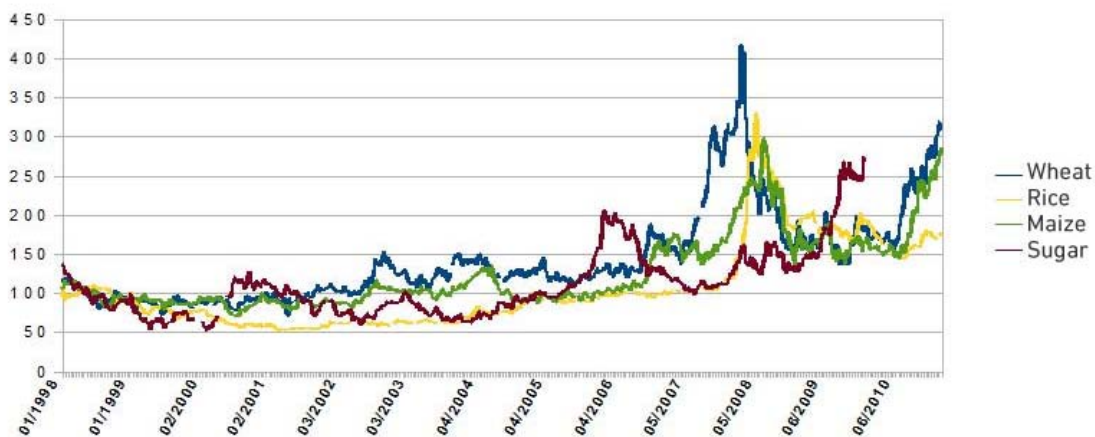
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# Introduction

The figures of the Food and Agriculture Organization of the U.N. (FAO) show that in 2010, the number of persons suffering from hunger in the world was 925 million, and that this number is likely to increase in the future. They also record an upward trend in the prices of staple foods, as can be observed in chart 1. This spring's disturbances in the Maghreb are not unconnected with this. We must not forget that the popular revolts currently spreading through the Arab countries are linked to escalating food prices. The application of the Green Revolution in this region and the overall package of Neo-liberal measures has made this region, formerly a major agricultural producer, highly vulnerable to the dancing international prices of staple grains. Egypt is an extreme case in point, being the planet's principal importer of wheat (Vivas 2011).

**Chart 1**  
**Evolution in the prices of the main types of staple farm produce**  
(Base 100 = 1998 average)



Drawn by the authors from the FAO database (2011)

It is important to remember, firstly, that a food crisis is not a situation-dependent phenomenon. The problem of access to decent and healthy food for everyone is, sadly, very widespread. The food crisis is the hunger that is striking many peoples, even though we use the same words to refer to a situation at a particular time, such as now, when food prices are spiralling. Since capitalist globalization became established over the past three decades and agricultural and food policies were consequently dismantled, hardship has been of a structural nature (GRAIN 2008a). Furthermore, it is inherent in the world food system, whose bases were written by the World Bank and the International Monetary Fund. That is why movements such as Vía Campesina are campaigning to rewrite the script of this story.

When explaining the rise in food prices, people usually mention factors of different kinds. Some of the factors most commonly cited are the claimed scarcity of food and the reduction of world reserves – which, as we shall see, is not only a fallacy but is also the carrot used to drive the upward movement in prices which those who speculate with foodstuffs wish to bring about.

### **The food scarcity myth**

To put a value on this lack of foodstuffs, one surprising formula is to dive into the statistics of the FAO (Food and Agriculture Organization of the U.N.), because it knows a lot about all this. According to its data, the latest forecast of cereal harvests for 2010 was calculated at 2 thousand 230 million tonnes (just 1.4 per cent less than the previous year's volume), being anyhow... the third largest world harvest recorded to date. And the calculated consumption of cereals for the same year was 2 thousand 260 million tonnes. So we have a shortfall, certainly, but let us bear in mind that, of this consumption, only one thousand 50 million are required to feed people; the rest is used in livestock feed, fuels and for other uses. But what is more, those 30 million tonnes of supposed shortfall are not decisive if we take into account, once again according to the FAO, the existence of over 500 million tonnes of cereal reserves. Shortage?

Source: Duch (2011)

One factor which is also mentioned and which actually plays a real part, is the rising price of fossil fuels. There is no doubt that the global agri-food model is petroleum-dependent, in each phase of the production chain. But besides, and above all, we cannot forget that if the price of petroleum goes up, it increases the profitability of agri-fuels, and of ethanol in particular. In this regard, according to the World Bank, once the price of petroleum has topped the 50 dollars per barrel mark, a 1% increase in its price entails a 0.9% increase in the price of maize intended for ethanol production. This is related to another factor which explains rising prices: the agri-fuel boom. To illustrate this, it is estimated that in 2010, 35% of the U.S. maize harvest (which is no less than 14% of world production of this grain), was intended for ethanol production (Vivas 2011).

In this report we refer specifically to the role of another – perhaps the most important – of the elements which influence the prices of staple foodstuffs. This factor is **financial speculation**. We are in a context where every movement in the Chicago, London or Hanover exchanges, where futures contracts for cereals and oilseed grains are negotiated, has repercussions on foodstuffs.

As we shall see, the maturing of capital in the financial sphere has taken place in parallel with the liberalization of agriculture – which explains the unprecedented repercussion which speculation has had in recent years on food prices.

We shall also bring up elements which make it possible to understand how financial capital has penetrated the food market through speculation.

As we consider the big winners in the field of food speculation, we shall also observe the role of Agribusiness. It is well known that Agribusiness increasingly controls the production chain and that a handful of firms dominate international food markets. But in addition, we shall see that they act directly in the financial markets, taking advantage of the privileged role which they have in the sphere of production. Likewise, we shall briefly consider a few of the social repercussions of keeping this system going.

One final point before we go into the speculative “meanders”: financial capital constantly migrates. Hopping from bubble to bubble, it alighted in the food market, generating the 2008 crisis. Today it is advancing towards a land grab: a new terrain for speculation, which is also food-related, and to which we must pay particular attention<sup>1</sup>.

### **Farmland: the new playground for financial capital**

For many people in power, the world food crisis takes the lid off a superlative problem: no matter where one looks, climate change, soil destruction, the loss of water supplies and the stagnation of income from crops within the monoculture paradigm, are putting pressure on the planet's future food supplies (...). At the same time, the finance industry, which bet so much on making good money out of debts and lost, is looking for safe havens. All those factors make farmland a shiny new toy with which to make gains (...). Throughout 2008, an army of investment funds, private capital funds, hedge funds and others of that ilk were avidly buying up farmland all over the world (...). The effect is that land prices are starting to rise, making it even more urgent to move rapidly.

Source: GRAIN (2008b)

<sup>1</sup> This phenomenon has been monitored by GRAIN for years; it is happening in an ever growing number of countries of the South, and now it threatens the access to land of the most impoverished peoples. See in this regard: <http://farmlandgrab.org/> and Lines (2010, 7).

# 1. Food speculation: what is it and where does it originate from?

## Initial definitions

**Speculation** consists of a set of commercial or financial operations whose purpose is to obtain a financial profit, based on price fluctuations. A speculator does not seek to enjoy the wares which he or she is buying, but rather to **benefit from fluctuations in their price**. In the extended sense, every form of investment is speculative; however, the term is usually limited to investment that includes no commitment to manage the wares in which it takes place, and is limited to the movement of capital (García 2008, 4). Speculative buying of a product is for the purpose of causing the price of that product to rise above its real value.

When there is an abnormal and prolonged increase in the price of a product, such that this price becomes farther and farther removed from the real price, a speculative bubble is produced. In those cases, the process may lead new buyers to acquire the product with the aim of selling it at a higher price in the future, which causes the price to spiral upwards. We can make out **three distinct types of speculation** in the agri-food sector:

### a) DIRECT HOARDING:

This consists simply of storing a product and keeping it off the market in the expectation that its price will rise. It is the oldest form of speculation and takes place on very different scales. In the following text box we highlight a very recent example. It is a commonplace operation which may be performed occasionally by the actual firms who stockpile grains (Cargill did it in 2008 in Indonesia, by holding back soya) or performed by stockbrokers, either on their own account or on that of their clients – who may be businesses, banking institutions or other types of client.

### b) SPECULATION IN FUTURES MARKETS:

This is the most usual mechanism between speculative actors, who buy and sell futures contracts in the expectation of making a profit on either transaction, whether or not these contracts materialize.

**A maize futures contract is an agreement which obliges one to sell or buy a set quantity of this grain at a future date. These contracts are “auctioned” on the stock exchange or “futures market”.**

### c) CURRENT FINANCIAL ENGINEERING:

This is speculation, carried out by means of increasingly complex financial instruments and mechanisms, which enables one, for example, to find investment funds tied to the agricultural markets. We shall examine this type of speculation in detail further on.



### **A single investment fund bought up 7% of world cocoa production**

“For months a single hedge fund has had all the world’s chocolate producers in a stranglehold. Last July the Armajaro fund (...) purchased up to 240,000 tonnes of cocoa – equivalent to 7% of world production – in a single transaction. The purchase, which was done on the Euronext market, where no limits are set for this type of commodity, caused the price of cocoa to shoot up to its highest level since 1977.

The thousands of tonnes of cocoa are still laid up, as sources familiar with the transaction confirmed to this newspaper, in the Hamburg, Antwerp and Amsterdam storage facilities. Ward has made this big purchase of cocoa because one of its main producers, the Ivory Coast, is virtually at civil war, and hence the product will soon be in short supply”.

Source: Carreño (2011)

Next we shall briefly consider where and how futures markets in the sphere of foodstuffs are formed, and shall also put forward some concepts that are fundamental when thinking about futures.

## **Origin and functioning of futures markets**

The history of food speculation on futures markets originated in the mid-19th century, when farm production was expanding in the United States. This type of development usually comes about in conditions of profound inequality from the socio-economic point of view; and the reality in the United States at the time was no exception. What happened was that small-scale farmers, being directly indebted to the banks which sold land, had no choice but to produce for increasingly distant markets<sup>2</sup>. At that time when international trade in cereals was just getting going, control over the food chain gradually became concentrated in the hands of a small number of intermediaries, who were nonetheless powerful, and are the ancestors of the present-day food multinationals.

Advance sale contracts began to be signed between producers and distributors. The former undertook to deliver a certain quantity of grain on a specific future date at an agreed price (PSIUSS 2009, 50). This type of agreement held out to primary producers a guarantee of being paid for their harvest, just as it assured distributors of obtaining a set quantity of grain. A key role was played in this by the opening in 1848 of the **Chicago Board of Trade (CBOT)**<sup>3</sup> – a central place where buyers and sellers of farm produce could meet and do business<sup>4</sup>.

<sup>2</sup> For further details see Zinn (2003).

<sup>3</sup> In 2008, the CBOT formed the CME Group, by merging with the Chicago Mercantile Exchange.

<sup>4</sup> The choice of the city of Chicago is because it is situated in the Great Lakes region, very close to the main U.S. farm production area, the “grain belt”. Besides forming a natural centre for river transport (connection with the Mississippi and Illinois waterways for exports to Europe via the Gulf of Mexico), Chicago became one of the country’s largest logistical interconnection nodes with the building of the railway in the same year the Exchange opened.

Well now, advance sale contracts did not offer complete assurance. The parties could go back on their undertakings; the merchandise might not be delivered as agreed; or there could be bad debts, etc. That being so, the Chicago Board of Trade soon took on the role of a clearing house. Thus it acquired its modern form as a private company acting as an intermediary between the signatories. It pays the purchase price of the grain to the seller and delivers the merchandise to the buyer. Not just anyone can do business in this type of place. One must be a member of the CBOT, pay a membership fee and demonstrate one's financial solvency.

To make this system run smoothly, contracts were "standardized" and took the form of **futures contracts** from 1865 onwards. The big difference between these and advance sale contracts is that a futures contract is exchangeable; it can be bought and sold. In short, a new market was created (PSIUSS 2009, 51). The number of individual farmer-producers who participated in a futures market was very limited, because it was too costly and the distance was too great. Today, those who opt to participate do so through intermediaries such as producer associations, processing firms, banks, stockbrokers, etc. (SOMO 2010, 3)<sup>5</sup>.

**Futures contracts or "futures"** are a form of what today we call financial "derivatives"<sup>6</sup>. They consist of agreements that bind the parties to a contract to buy or sell a certain number of wares or securities on a set future date. The value of a future 'derives' from the price of the merchandise<sup>7</sup>. For example, the value of a gold future refers to the price of gold. Over time, the following futures have come into being: mortgages, bonds, interest rates, currencies, shares, stock exchange indices and commodities, amongst which are located food primary materials (see text box), which are the ones that we shall be dealing with in this report<sup>8</sup>.

It is important to emphasize that on the futures market, **what is bought and sold are contracts and not the produce itself**. The contract price changes according to supply and demand on the futures market. The actors who take part in the transaction do not necessarily intend to actually acquire the soya or maize stipulated in the contract. Most of these contracts are used "speculatively, that is, with the aim of making money out of them – specifically, out of the fluctuations in their prices" (García 2008, 7). Staple agri-food futures are traded only on **agricultural futures exchanges**, also called "regulated markets"<sup>9</sup>.

5 According to the U.S. National Corn Growers Association, fewer than 10% of growers use the futures market in their risk management. In the Kansas area, up to 74% of growers are still signing advance sale contracts instead of participating in the futures markets (PSIUSS 2009, 49).

6 Another financial derivative instrument which has been growing in importance in food speculation is the financial option. This is a contract signed between two parties. The option buyer obtains the right, but not the obligation, to buy the product to which the option refers (which may be commodities, shares, bonds, etc.) at a set price. The one who does have an obligation is the option seller: he undertakes to execute the transaction if the buyer so requests. Here lies the difference compared with futures contracts, which carry an obligation to buy and not a right to buy (see: [http://en.wikipedia.org/wiki/Option\\_\(finance\)](http://en.wikipedia.org/wiki/Option_(finance))).

7 In financial terms, the merchandise or goods to which the futures contract refers is the "underlying asset" of the contract.

8 In what follows, we shall use the concepts "commodities", "basic products" and "primary materials" in an equivalent way.

9 Amongst the main exchanges of this type are currently: Chicago Mercantile Exchange – CME, NYSE Euronext (London and Paris), RMX (Hanover), Tokyo Commodity Exchange, Dalian Commodity Exchange (China), Buenos Aires Futures and Options Exchange, Multi Commodity Exchange (Mumbai), South African Futures Exchange – SAFEX. We shall see farther on that as financial markets have grown more complex, another space for buying and selling other derivative products, which is not regulated, has grown up: that of private or "Over-the-Counter" (OTC) contracts.

A **commodity** is a basic product, a **homogenized and standardized primary material**, to which a current price is assigned at international level. It becomes goods whose price does not vary according to their quality, or where and how they are produced. For example, no difference is established between a litre of orange juice concentrate from Brazil and a litre from Florida.

There exist three categories of **commodities**:

- **Farm produce** (essentially wheat, maize, sugar, cotton, soya, coffee, cocoa and orange juice concentrate),
- **Metals**
- **Energy commodities** (above all petroleum and gas).

Well now, prices of agricultural primary materials have the special feature of being very volatile, and the price of futures contracts replicates this tendency. That is why futures markets represent very attractive terrain for speculating. Indeed, according to the U.S. Commission which regulates futures trading in the primary materials sector (the Commodity Futures Trading Commission), a **speculator** is one who neither produces nor uses certain merchandise, but who nevertheless risks his or her capital in the trading of futures contracts linked with said merchandise. His or her aim is to make profits out of variations in the price of the merchandise (PSIUSS 2009, 51).

## How do futures prices affect food prices?

The explanation is that grain prices usually follow futures contract price trends.

The greater the demand for a futures contract, the more its price will rise. With it will also rise the price which it is estimated that grain will have on a future date. This impacts the current real price of grain – upwards, of course. The same phenomenon occurs the other way round, when the futures contract price goes down. Let's look at an example: if a tonne of wheat is sold at €115 today but, through a futures contract, the grower or the actor who controls production can sell it for €230 in three months' time, he might judge it worthwhile to put the product into storage and wait out the three months. This decision means that the quantity of wheat on the market goes down and that the price does actually go up (WDM 2010c).

## Key ideas about futures

- Having a futures contract does not mean having the intention to physically acquire the primary material to which the future refers
- On the futures market, what are bought and sold are not primary materials, but rather contracts. However, it works like any other merchandise. That is, when there's heavy demand for a futures contract, its price rises.
- When the price of a futures contract for a primary material rises, the price which it will supposedly have in the near future rises. This means a real current price rise of the primary material. So, price variations on the futures markets influence price variations of the goods to which the contracts refer.

## In the 1930's: a regulation that legitimized speculation

Ever since the early days of the 20th Century, food speculation on the futures market has given rise to conflict and wrangling. According to the FAO, on the Chicago Board of Trade “instances of market manipulation – especially “restrictions” or “stockpiling” – have been cited at least once per decade since it was set up” (2010, 70). Additionally, various sources of the time reported protests by U.S. farmers against a market in which they did not participate. Criticism in the cities became more acute when during the First World War it was learned that firms such as Cargill had made record profits amidst the growing fluctuation of high prices<sup>10</sup>. Speculation was also accused of being responsible for the fall in prices that marked the 1920's and 30's. At that time, producer co-operatives tried to organize themselves in such a way as to take control of prices, by directly controlling production and marketing. The newspapers of the period even recorded that the Administration planned to take control of the five main grain-selling firms, whose transactions amounted to over a thousand million dollars per year<sup>11</sup>.

Between 1922 and 1936, in spite of pressure from the corporate and financial sector, the U.S. government intervened and strengthened the legislation regulating food futures markets. Basically, the idea of regulating was to **reduce speculators' leeway for acting**. To do this, limits were set on the maximum number of contracts a single actor could trade<sup>12</sup>. In the present day, Roosevelt's policy is considered positive from the regulatory viewpoint. However, it is important to point out that limits were set on speculation, while at the same time the futures market was legitimized, by declaring this type of financial transaction to be “in the public interest\_ (see text box).

The existence of futures markets, intended to bring about better management and assumption of the risks attendant upon price variations, was thereby justified (**see an example in Annexe 1**).

10 See: <http://www.cargill.com/wcm/groups/public/@ccom/documents/document/doc-cargill-history-timeline.pdf>

11 See for example the article: “Wheat and Trade” of 30 June 1924 (<http://www.time.com/time/magazine/article/0,9171,718641,00.html#ixzz1Ebreivhp>).

12 Options were also prohibited within the Exchange and in unregulated transactions. They were reinstated from 1981, but only for actors regarded as “traders”, and within a regulated market.

It is for this reason that the limits imposed do not concern all actors. They apply specifically to speculators and they exempt “traders”, that is, those who actually produce, buy, sell and process the products (PSIUSS 2009, 105). In parallel, in 1933 a major farm policy, regarded as the first “Farm Bill”, was brought in. It used strong incentives for stabilizing prices, starting to control supply in markets through production quotas and public storage. Under Roosevelt’s mandate the first public insurance policies dealing with prices were also created. One of the results of this policy was that the co-operatives lowered their demands, accepting to play the futures market game.

“The transactions to which this Act refers are part of interstate and international trading and **are in the public interest**, providing the means for suitable risk management and assumption... (...), or more information on the future evolution of prices through trading in a market that has greater liquidity, fairness and financial security.”

Source: Commodity Exchange Act, 1936, quoted by PSIUSS (2009, 53)].

## 2. The scaffolding of 21st-century food speculation

### Liberalization of financial and agricultural markets: two parallel processes.

Over the past few decades, the modus operandi of food speculation has grown more complex. Its current form is the result of the increasing closeness between two processes which, although they are of different kinds, have been gradually converging to the point where financial capital has penetrated the international food market. The first of these processes lies in the **maturing of speculation in the financial markets**. At the same time as new instruments were continuously being introduced at the main stock exchanges, there was steady growth in “transactions between private individuals” (OTC)<sup>13</sup>, over which governments had, and still have, no authority, or even verified information (Suppan 2008). Colossal sums are moved “over the counter”, approximately equivalent to 10 times the current world GDP, or over 30 times the value of the contracts traded on futures markets (for further details **see Annexes 2 and 3**).

The second process took place in the world of farming at global level, and had an unprecedented effect on small-scale producers, not only in the South but also in the North. This process was the **liberalization of agricultural markets** through the dismantling of national price-control policies. The social consequences of neo-liberal policy in this sector have been well documented and are an arena of constant campaigning for organizations such as Via Campesina<sup>14</sup> – whilst, in contrast, the World Bank has put forward the argument that world prices will stabilize thanks to this opening for trade. The FAO (2008) has found that the opposite is true. Over the last 20 years, volatility in the prices of agricultural staples has not stopped increasing<sup>15</sup>.

<sup>13</sup> OTC: “Over-the-Counter”.

<sup>14</sup> See for example: <http://viacampesina.org/en/>; [www.grain.org](http://www.grain.org)

<sup>15</sup> Boussard, Gérard and Piketty (2005) refer to how, when customs barriers between markets are removed, the various price fluctuations come into “resonance”, refuting the dominant classic large numbers” theory.

If we bear in mind that price fluctuations are very attractive for speculators because it is precisely from these fluctuations that profits are generated, we can understand financial capital's growing interest in entering this sector to an ever greater extent.

In what follows, we shall see the convergence of these two processes which was to give rise to contemporary food speculation.

## Fertilizing the ground for speculation

Between 1990 and 2000, the current regulations in the futures market were debilitated by intensive scheming led notably by banks such as Goldman Sachs, which began to invest massively in staple produce. For instance, in 1991 this bank set up a fund so as to be able to invest in the price of primary materials as if it were investing in the shares of any firm quoted on the stock exchange. That same year, the fund was exempted from the limitations applied to speculators (WDM 2010a, 8)<sup>16</sup>.

During those years the ground was being fertilized ready for financial capital to enter the primary materials market. In a context of steady economic and demographic expansion, it was seen as very unlikely that demand for primary materials, and above all foodstuffs, might diminish (PSIUSS 2009, 90).

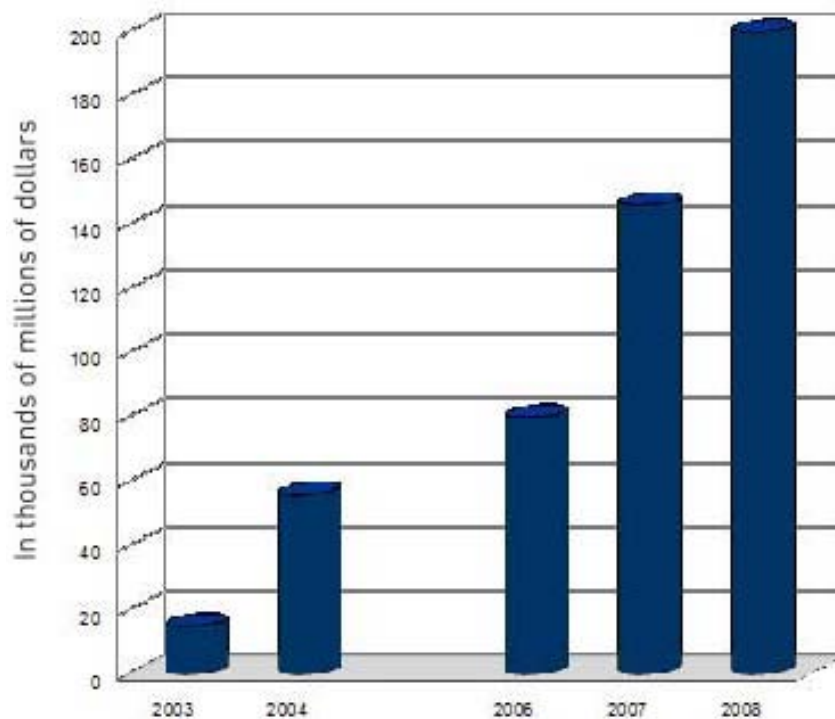
The persuasive power of these arguments and the creation of a series of instruments which we shall describe farther on, explain that when speculative capital began to migrate away from the explosion of the "dot com" bubble (2000), hopping onto the property and lending bubble (2007), it came to rest in the staple food produce market<sup>17</sup>. In chart 2 we can follow the evolution of investments based on financial indices of basic products (food and non-food) between 2003 and 2008<sup>18</sup>.

<sup>16</sup> The reduction in limitations did not stop in that period, but has continued to occur. On the Chicago Board of Trade wheat market, up until 2006 the position limits of six financial institutions were increased. They went from a maximum tolerated number of 39,000 contracts (equivalent to 5.3 million tonnes) to 130,000 (17.5 million tonnes) (PSIUSS 2010, 105). This is a considerable proportion in a market representing 60 million tonnes (See: [http://www.cftc.gov/dea/futures/ag\\_lf.htm](http://www.cftc.gov/dea/futures/ag_lf.htm)).

<sup>17</sup> We shall see at the end of this section that migration is still going on, this time into another sector that is extremely sensitive from the point of view of the Rights of Peoples, farmland.

<sup>18</sup> The authors did not have access to the data for the year 2005.

**Chart 2**  
**Evolution of investment in the financial indices of basic products**  
 (Thousands of millions of dollars between 2003 and 2008)



Drawn by the authors from the Commodity Futures Trading Commission (2008, 3) and Verleger, P. Commodity Investors: A Stabilizing Force? The Petroleum Economics Monthly, March 2006, quoted by: PSIUSS (2006)

## Ever more complex financial engineering

When a pension fund or insurance company wants to make profits by speculating in the commodity derivatives sector, whether food or non-food, it usually bases its investment on **indices of basic products** ("Commodity indices"). These bundle together very different primary materials. We can imagine them as a sort of "lasagne" or "basket" where each "layer" or "ingredient" refers to a futures contract for a basic product (petroleum, metals, etc.). The actual index consists of a value calculated mathematically from the profits generated by the futures contracts of each product that makes it up. These indices are usually managed and operated by speculative funds ("hedge funds"<sup>19</sup>). In the following table we consider the proportions per commodity in the globally best-known indices.

<sup>19</sup> Hedge Funds, whom many term "speculative funds", are open to a limited number of members (frequently those with large fortunes) who pay a share to the fund manager. As their name indicates, they seek to hedge against risks inherent in their investments through diversification of the sectors in which they take up positions; therefore they are present in a very large number of sectors. These funds are exempt from a great number of the regulations that customarily apply to investment funds. Despite their name, these funds do not cover risks. On the contrary, they place the most risky bets they can, and seek to make maximum profits in a minimum of time. Large sums of money are usually put up and invested in derivative products (WDM 2010d).

**Table 1**  
**The best-known indices of basic products**

Basic product	Deutsche Bank Liquid Commodity Index	Dow Jones – Union de Banques Suisses	Thomson Reuters Jefferies	RICI	S&P GSCI (Goldman Sachs)
Energy	55%	33%	39%	44%	70.2%
Industrial metals	13%	18.8%	13%	14%	8%
Precious metals	10%	12.4%	7%	7%	3.2%
Arable farming	23%	30.2%	34%	32%	14.1%
Livestock	-	5.7%	7%	3%	4.5%
Number of components	6	19	19	35	24

Source: Lines (2010, 8)

The Goldman Sachs fund which we mentioned above, and for which the bank obtained exemptions in 1991, articulates with the index created by this same institution, and which is considered in the above table. Thus it constitutes an **indexed basic products fund** (“Commodity index fund”). Funds of this type have generated considerable gains (see text box)<sup>20</sup>. They have an impact on the prices of all these primary materials of the index at once.

In 2008 Goldman Sachs made a third of its net income (around 1,500 million dollars) thanks to investing in primary materials. Its commodity index “went from having barely 8,000 million dollars invested in 2000 to being home, at present, to 100,000 million dollars, which it is investing against the evolution of commodities (including petroleum)”. In 2010, the index was revalued at 50% higher, with a rise of close to 10% in December. So far this year, the rise is already nudging the 14% mark.

Source: Carreño (2011)

In the text boxes which follow we cite examples in the Spanish state of speculation with one of the “baskets” or “lasagnes” of basic products (in this case foodstuffs) mentioned above. In these examples, we draw attention to the basic products to which the offerings by both savings banks refer. Amongst them are **coffee, sugar and cocoa**. Unlike all other contracts on agricultural futures exchanges, contracts in Europe for these three products have no limits (FAO 2010, 72). What is more, in general, the banking institutions which offer these products only undertake to remunerate clients in the event that prices go up by a set date. When acting for themselves in the futures markets, these institutions can “bet\_ on a rise or fall in prices.

<sup>20</sup> In parallel with indexed funds, the number of funds quoted on the exchange (better known as Exchange-Traded Funds, or ETF's) has been on the rise. In 2010 the latter came to represent between 80 and 85% of financial investments on the primary materials market (Lines 2010, 5).



## CatalunyaCaixa savings bank's new 100% Natural Deposit makes it possible to obtain a yield of up to 7% per annum

12 January 2011

CatalunyaCaixa has launched onto the market a new product, the 100% Natural Deposit, which holds out the opportunity to obtain a dividend of 7% per annum, with the whole of the capital secured; the yield will depend on the evolution of a basket made up of three primary materials: sugar, coffee and maize. The institution's new deposit will have three possible maturity dates, depending on quotations for the basket's components. If at the first tracking, in March 2012, the quotation for the three primary materials is equal to or greater than 100% of their quotation at the initial tracking, the deposit will pay out a dividend of 7% and the investment will then be cancelled. Otherwise it will continue to run until the next tracking, one year later; at which time, if the same requirement is met, a dividend of 14% will be paid out. If not, the deposit will run for a further year. The final tracking will be in March 2014, when a dividend of 21% would be paid out. If, on that date, the necessary condition has not been met, the deposit would be cancelled and 100% of the invested capital would be returned. The evolution of quotations has been very positive in recent months. The price of coffee went up 34%, with sustained growth in recent months; this fact is mainly attributed to the uncertainty of the securities markets due to the weakening of the dollar, which is driving investors to focus on this type of primary material. Moreover, the outlook for demand for coffee in the medium term is for growth, due to the increase in specialist niches in mature markets and the entry of new consumers into emerging markets. The price of sugar, for its part, increased 61% over the past year, due to growing demand, which is outstripping production. The price of maize over the past year has grown 38%. The higher demand for maize for human consumption is explained by the increase in world population and its use in producing biofuels.

Source: [http://www.catalunyacaixa.com/salaprensa/noticies/detallDiaL.action?idNoticia=1481&request\\_locale=ca](http://www.catalunyacaixa.com/salaprensa/noticies/detallDiaL.action?idNoticia=1481&request_locale=ca)

Recently Veterinarios sin Fronteras (Vets without Borders), along with Coordinadora de Organizaciones de Agricultores y Ganaderos (Umbrella Organization for Arable and Livestock Farmers' Organizations) launched the **That's Enough of Speculating with Food!** campaign. The campaign reveals the impacts of speculation and mobilizes the citizenry to petition Caixa Catalunya savings bank to remove said deposit from its portfolio and to opt for a more ethical, just and solidary banking model.



Source; [www.veterinariossinfronteras.org](http://www.veterinariossinfronteras.org)

## Caixa Girona savings bank's Primary Materials Deposit<sup>21</sup>

5 May 2010

Caixa Girona has launched a new savings product linked to the behaviour of coffee, cocoa and sugar called the Primary Materials Deposit. So, you will be able to invest in these three food sector products and obtain, in one year, a return according to how these primary materials evolve on the markets. With Caixa Girona's Dipòsit Matèries Primeres you'll be able to earn 8.00% (7.96% APR) if the prices at which cocoa, coffee and sugar are quoted are higher than the initial ones. Otherwise you'll be guaranteed your capital investment but you won't get any remuneration (0% APR). The minimum sum invested in this deposit is 3,000 euros and no withdrawals are allowed, either of the whole sum or part of it. Should the client need to have the money available to him or her, Caixa Girona provides a loan on preferential terms.

Source: <http://hipotecasydepositos.com/deposito-materias-primas-de-caixa-girona/>

### 3. Agribusiness' role in food speculation

Although international trade in cereals involves only about 10% of total production at world level, it constitutes a fundamental element in setting international grain prices. Hence any actor who aspires to invest in the food futures markets needs information about world trade. Who has direct access to that information? Let us remember that in 1999, it was considered that Cargill already controlled 45% of the world grain trade, and ADM, 30% (UK Food Group 2003, 39). If to those two groups we add Louis Dreyfus, Bunge and Glencore, we have the dominant actors in the sector. Active on all five continents, these multinationals are positioned as main intermediaries; furthermore, they have a strategy for absorbing co-operatives. The co-operatives, when not actually bought up, become trapped without the ability to negotiate prices<sup>22</sup>.

**Table 2**  
**Example of corporate control over U.S. exports (1999)**

Grain	Firms	Percentage
Maize	Cargill, ADM, ZenNoh	81%
Wheat	Cargill, Columbia Grain, Peavey, United Grain	47%
Soya	Cargill, ADM, ZenNoh	65%

Source: Hayenga y Wisner (1999) from USDA data.

<sup>21</sup> In November 2010, Caixa Girona was taken over by "La Caixa".

<sup>22</sup> See: Kneen, B. *Invisible Giant: Cargill and its Transnational Strategies*. London: Pluto Press, 2002, quoted by UK Food Group (2003). A thoroughgoing analysis of the reach of corporate power can be found in: GRAIN (2008 and 2009).

This dominant role has considerable repercussions in other sectors, since the most commonly traded cereals and oilseed grains are also used to produce agri-fuels, at the same time as they constitute the main components of industrial feeds, which are the basis for production in intensive livestock farming (García 2008).

**It is in that space that what is produced, and how, is determined; prices are set; and those who produce food are selected** (García, Rivera and Ortega, 2008). Just one of these multinationals, by increasing or reducing demand from its own subsidiaries, generates considerable impacts. However, firms do not need to meet and conspire together in order to “manipulate” the markets. They have only to concentrate information in one place, and to be able to interpret their competitors’ actions, for the “dance of the elephants”<sup>23</sup> (Schubert 2002) to begin.

In general, the levels of concentration current in the present agri-food system are alarming, giving rise to oligopolies at each node of the chain. These are controlled by firms such as Monsanto, Cargill, the agri-food and big distribution industry (Wall-Mart, Carrefour, amongst others). The control is more and more direct. For example, it is estimated that over 50% of world pork production takes place in industrial farms. In Vietnam, 40% of rice is grown under contract with big firms. Subcontracted production is a phenomenon that has spread to crops of other commodities, such as coffee, cocoa and others.

Source: GRAIN 2010a

The privileged situation they occupy in terms of setting prices and accessing information has enabled several of these multinationals not only to become priority partners for financial capital, but also to participate directly in this market. Thus for example, Cargill offers to pension funds and hedge funds, in the “risk management” section of its Website, to open the doors of these markets to them through a series of speculative financial instruments. It announces in this respect that it has over 10 years’ experience of replicating commodity indices in the unregulated markets<sup>24</sup>. It offers “passive” and “active”<sup>25</sup> speculation financial products. Amongst them, index swaps as follows: S&P Goldman Sachs Commodity Index, Dow Jones - USB Commodity Index, Custom Index Swaps, Enhanced Beta Index Swaps and Beta + Alpha Index Swaps<sup>26</sup>.

23 Words of the President of Nebraska’s Farmers Union, quoted by Schubert (2002).

24 See: <http://www.cargill.com/company/businesses/cargill-risk-management/investor-risk/index.jsp>

25 “Passive” investments follow the evolution of the basic product indices, whilst “active” ones enable an investor to define and continuously change his strategy.

26 In spite of being less transparent in its participation in the financial markets, the Louis Dreyfus Group also announces on its website that it invests in these markets (see: <http://www.ldcommodities.com/-Finance-.html>).

## **Agribusiness and financial markets: a privileged position**

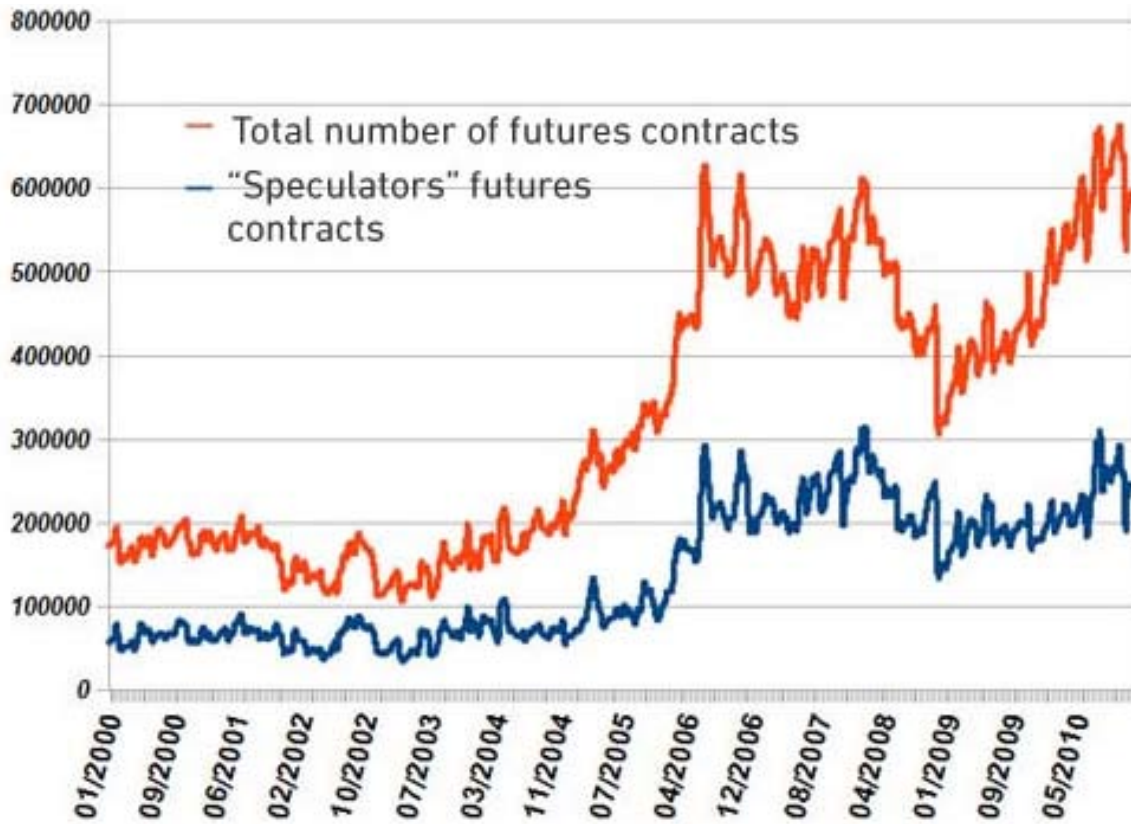
- The U.S. firms which control the supply and processing, futures, prices and transportation of commodities, also carry on these lines of business in countries with which U.S. farmers are supposedly in competition (Schubert 2002).
- Institutional investors don't know how the futures market works (...). Those who come out on top (besides Goldman Sachs), are the grain trading professionals. They can even bet on a fall in prices, whilst at the same time selling and buying grains (Dizard 2007).

As we mentioned above, non-financial actors, who are regarded as “traders” or “bona fide hedging operators”, can trade an unlimited number of futures contracts, unlike “speculators” (FAO 2010). Grain multinationals fall into the first category. What market share do “traders” have? We illustrate it in chart 3, which records the total number of wheat futures contracts on the Chicago Board of Trade (orange line) and, within that total, the number of “speculators”, that is, those who neither buy nor sell grains directly (blue line). The difference between the two lines represents the quantity of futures of “traders”, including Agribusiness, which therefore has a predominant role in this market.

Why are actors who fall into the category of “traders” exempted from limitations? This is because a distinction is made between two types of motivation in the futures markets: the desire to minimize risks on the part of grain sellers and buyers, and the intention to speculate for maximum profit on the part of purely financial actors. However, one cannot help noticing the porous barrier between the two motivations. It is difficult to determine when “traders” are protecting themselves from risks and when they are purely speculating. Nor is it straightforward to determine when financial actors are speculating and when they are seeking to minimize risks. What is clear though, is that they are all trying to make a growing amount of profit, and that in order to do so, they “bet\_ on price variations between futures and the basic products to which they refer (PSIUSS 2009, 64).

Chart 3

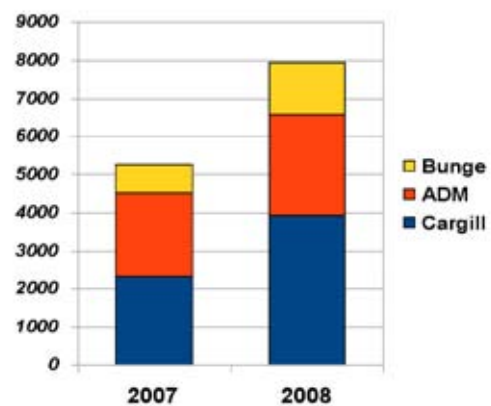
Distribution of the number of wheat futures contracts on the Chicago Board of Trade (2010 - 2011)



Drawn by the authors from the Commodity Futures Trading Commission database (2011)

It is important to remember that it was precisely at the most critical stages of the 2007-2008 world food crisis, that Agribusiness made record gains. Cargill reported an approximately 70% increase in its profits compared with 2007 and an increase of 157% compared with 2006 (GRAIN 2009)<sup>27</sup>. As far as ADM is concerned, its profits "declined slightly in 2008, due partly to its large volume of investments in the falling U.S. ethanol market; but even so, the firm's gains grew by 41% compared with 2006. Here we do not consider Louis Dreyfus, a giant amongst agricultural staples trading houses, whose annual sales for 2008 exceeded 22,000 million Dollars, but who does not provide information on its profits (GRAIN 2008a and 2009; Sánchez 2011).

Chart 4  
Grain corporations' profits during the 2008 food crisis



<sup>27</sup> See also: <http://www.cargill.com/company/financial/index.jsp>

**In the following text box we highlight a very recent case where different types of speculative practice on the part of two giants of Agribusiness are interwoven.**

### **2010 food crisis: “made in Agribusiness speculation”**

The international price of wheat shot up two months before the Russian government decided to ban exports. But not only on the Paris and London exchanges; above all, within Russia, as an effect of local speculation. This is because in recent years, a few foreign investors in an alliance with the local oligarchy have taken control of around half of all Russian wheat production. Citing the drought, these actors asked higher prices for their harvests; and the government did nothing to intervene – not even drawing upon the national reserves. The authorities responded solely when the interests of Agribusiness – in this case, those of Glencore – came under threat. In point of fact, this was one of the firms who had signed export contracts prior to the drought, agreeing to deliver grain at 170 dollars/Tonne. When the international price hit the 220 dollar mark, they would have lost millions by selling. The only way to avoid delivering at the initially agreed price was to claim force majeure. Accordingly, the government was lobbied intensively to ban exports. Simultaneously, thanks to speculation on the futures markets, prices had climbed even higher. And that is when the countries of South-East Asia and North Africa, heavily dependent on imported Russian wheat, had to sign new contracts with Agribusiness, at much higher prices. For example, Jordan bought wheat at 324 dollars/Tonne and Egypt at 310 dollars (GRAIN 2010c).

But the gains for Agribusiness don't stop there. Cargill congratulated itself for having “read the markets correctly” and “responded swiftly” in this case. It raised its stakes in the wheat futures markets. In 2010 it made almost as much profit as in 2008 (Sánchez 2011).

### **Recapitulating...**

Financial liberalization has created a reserve of speculative funds that represents 10 times the total value of world production. At the same time, the liberalization of farming markets has increased the volatility of staple grain prices, sweeping away small-scale farming in the process and enlarging an international market controlled by a handful of multinationals.

The increased demand for agricultural primary materials and the volatility of prices draws more speculative money into the commodity futures market. This amplifies the volatility of the futures markets and, consequently, farm produce prices. So the gains of the grain multinationals, active both in the financial sphere and on the international market, increase. These firms are the only “bona fide hedge operators” who can place massive bets on a rise or fall in futures prices. They have a decisive margin of action in price variations.

Basically: they buy cheaper and sell dearer, both commodities and futures. Their gains strengthen their control over the production chain. Those same firms process more and more cereals and grains, increasingly channelling them into intensive livestock farming (manufacture of feed) and agrifuels, creating a shortage of basic products. That is when the speculators' forecasts are proven correct.

## 4. Social repercussions, and conclusions

We have been able to see, all through this report, that the big winners from food speculation are financial capital actors, and Agribusiness. We are going to ask ourselves now, briefly, about the losers. And losers there are: in countries impoverished by economic globalization they number about one thousand million human beings. To this number we must add all the small agricultural producers in the countries of the North, whose existence is constantly threatened.

### Impacts on the Periphery

An obvious fact: when the price of staple foodstuffs goes up, people have less money to buy them with. While in the wealthiest countries, the money that households spend on food represents between 10 and 15% of their budget, in the South, this figure is between 50 and 90%. For example, on average, families in Bangladesh, Nigeria and Afghanistan spend around 65% of their resources on food. For Haitians, Libyans and Bolivians this figure is around 50% (IMF 2007). But what is more, if prices go up but, in any case, people have to buy something to eat in order to survive, the share of the budget available to cover other needs, also basic, such as health and education, will be reduced. It has been observed that there is a trend towards increasing job insecurity amongst the most vulnerable beings: women, girls and boys, and the elderly.

The extreme price increase is not the only element, generated by speculation, that affects the most impoverished families. **Fluctuation itself is a factor with negative repercussions**, at different levels. We might wonder whether, in the end, a basic product price increase does not benefit the producer. However, we must remember that a great number of impoverished countries depend on primary materials for both export and import.

Neo-liberal policies have consolidated colonial economics, trapping whole economies in a primary-exporter role that is very difficult to change. In the 1980's and 90's, many impoverished countries suffered as a result of the drop in the price of sugar, cocoa, coffee, tea, cotton and rubber. It is estimated that by 2002, these countries had lost 240,000 million dollars per year since the drop in the 10 "tropical" primary materials in the 1980's. The situation of most concern arises when the prices of the non-food primary materials which a country exports do not go up in line with the prices of the foodstuffs it imports.

In order to plan ahead, a certain amount of price stability is called for. The following text box highlights the indirect repercussions which speculation may have, and which are not usually taken into account, but which make forecasting even more difficult. Speculation destabilizes a country economically and politically because it causes price volatility (WDM 2010c).

## The case of rice

The international market for rice is very small and concerns only 6-7% of global production. When the price of rice rose, key exporters such as India, Vietnam and Thailand applied measures to limit exports so as to ensure the availability of rice on local markets. The international market for this food contracted even more. Prices were forced up by a natural tendency to stockpile rice in the home, to guard against price rises. And this contributed to an even greater increase in prices. According to the WDM (2010c), although there was no direct influence from speculation in this case, there exists a close relationship between the price of wheat and that of rice. In countries like India, wheat and rice substitute for one another. So, when the cost of importing wheat went up, imports fell off drastically and demand for rice increased, along with its price. Such that speculation had an indirect, but real, influence on the price of a foodstuff which is not found on the futures markets.

## Impacts at the Centre

Speculation does not favour agricultural producers in the countries of the North either. In fact, co-operatives do not even have direct access to futures markets. If they opt to participate in these markets, they have to go through intermediaries who – unlike the cooperatives – have the financial means to be members of the Exchanges. Moreover, one should bear in mind that their main occupation is not buying grain, but producing and selling it. Hence their role in futures contracts is limited to undertaking to deliver a consignment of merchandise.

If we consider for example the contracts which Cargill signs with producers, we are struck by how little protection the producers receive from the risk of volatility. In the “Premium Offer” contract<sup>28</sup>, farmers must undertake not to benefit in the event of a price rise. The contract stipulates that the farmer will sell his grain to the firm at a set price, if the price at the time of delivery is higher. However, if the price comes to be lower than the price fixed, it is stipulated that the farmer is entitled not to sell. But... what choice does he have? Can he store his grain until he finds a buyer other than Cargill? Not always; actually, almost never. We could say that part of Agribusiness’ strategy is precisely to transfer risks to producers.

Besides, as García points out, the income of small-scale farmers in the North has not stopped going down in recent years. In fact, the slice taken by intermediaries is alarming in different sectors. For example, it is estimated that the difference between what the consumer pays and what a family livestock farm in the Spanish state receives is 324% (García 2008, 16). In 2010, in the case of apples, this proportion was 390%, 675% for grapes, 705% in the case of lemons and 576% in that of onions (Boix 2011).

<sup>28</sup> Contract available at <http://www.cargill.com/company/businesses/cargill-risk-management/producer-risk/producer-risk-products/index.jsp>



## To get out of the meanders: food sovereignty, Now!

The futures markets are places which maximize the profits of a very small number of actors, from both the financial capital and production capital sphere. And those profits are made through speculation, that is, precisely thanks to price volatility. To think that these markets can offer some hedge against the risks of price fluctuation is like asking the fox to guard the henhouse. Regulating this system does nothing but legitimize and perpetuate it.

As Hildyard emphasizes, at different times in history, in order to hedge against risks, people have precisely avoided resorting to financial derivatives. In India the use of options, which had been brought in during the colonial era, was banned from 1956 to 1995. Furthermore, the majority of African countries have no futures markets, with the exception of South Africa, Morocco, Egypt and Tunisia. In these countries, the volume of transactions is not very great, and is concentrated instead in currency derivatives. Other futures markets in the food commodity sector in Africa (Kenya, Nigeria, Ghana, Ivory Coast and Uganda) are struggling to develop without much success at present (2010, 5).

Historically, to limit risks, agricultural policies of price control have been applied. Such was the case with the Common Agricultural Policy of the E.U. up until 1992 and with the "Farm Bill" in the United States.

On another scale, farmers have turned to diversifying their livestock species and crop varieties in response to the changes associated with the natural conditions of production and to price fluctuations. And so it is necessary to preserve and develop the diversification and resilience of farming systems.

If in decision-making spheres, G20 or others, besides clearly identifying the contradictions inherent in the food crisis, a space were allowed for listening to those mainly affected, the situation would be very different. Small-scale producers, in both the South and the North, banded together in *Vía Campesina*, unceasingly denounce the liberalization of agriculture and the power of the farming industry. They are demanding not security, but **food sovereignty**. Around this notion they have made, for example, particularly urgent proposals: local-scale production, environment-friendly farming, consumption with minimum "food miles", and participation by everyone in farming policies<sup>29</sup>. It is important to promote policies whereby producers and consumers decide together what price the food they want should have. It is through initiatives of this type, and in an effort to show empathy, to listen and to work together on the part of the various capitalist system resistance groups, that we shall be able to tackle current global problems responsibly and regain the chance for all the planet's inhabitants to live in dignity.

<sup>29</sup> See: <http://viacampesina.org/en/>

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## RECOMMENDED WEBSITES ON THE SAME SUBJECT AS THE REPORT

- World Development Movement campaign against food speculation: <http://www.wdm.org.uk/food-speculation>
- GRAIN: <http://www.grain.org/>  
and the Food Crisis and the Global Land Grab website: <http://farmlandgrab.org/>
- Institute for Agriculture and Trade Policy, Trade Observatory: [http://www.tradeobservatory.org/issue\\_foodSecurity.cfm](http://www.tradeobservatory.org/issue_foodSecurity.cfm)
- Palabre-ando, articles by Gustavo Duch on subjects such as food sovereignty, the food crisis, agroindustry and organic farming: <http://gustavoduch.wordpress.com/>
- Veterinarios Sin Fronteras (Vets Without Borders), a website on the food crisis and food speculation: <http://www.veterinariossinfronteras.org/es/Especiales/ESPECIALCRISISALIMENTARIA2011/crisisalimentaria.html>
- Via Campesina: <http://viacampesina.org>
- Campaña "No te Comas el Mundo" (Don't Eat Up the World) campaign: <http://www.noetmengiselmon.org/spip.php?&lang=es>
- Soberanía alimentaria, biodiversidad y culturas (Food sovereignty, biodiversity and cultures) magazine: <http://revistasoberaniaalimentaria.wordpress.com/>
- β Ecología Política (Political Ecology) magazine. Issue on "La agricultura del Siglo XXI" (21st-Century agriculture): <http://ecologiapolitica.info/ep/38/38.htm>
- Observatori del Deute en la Globalització (Observatory on Debt in Globalization): <http://www.odg.cat>
- Committee for the Abolition of Third World Debt: <http://www.cadtm.org>

## Behaviour of a grain seller in a futures market

### By way of illustration...

In September, a grain seller buys 125 tonnes of maize at a price of €150/Tonne. He notices that on the futures market the futures contract maize price stands at €200/T. He decides to **sell a futures contract**. Thereby he takes it upon himself to deliver 125 tonnes within a 6-month period to a specified delivery point. In financial jargon he is said to be taking up a "short position"<sup>30</sup>. In December, the seller decides to proceed to sell his maize, but he considers that it does not suit him to sell it on the terms set out in the contract.

Actually, he prefers to sell to local customers and in separate quantities. He must breach the undertaking he gave in the contract. To do this, he undertakes to buy the same quantity of maize as he was to have sold under the contract. He enters into this undertaking by buying a new futures contract, and taking up a "long position". The second contract offsets the first one; hence the seller no longer needs to go ahead with delivery as had been stipulated. At the time he acquires this contract, the price has fallen from €200 to €125.

And so the seller gains the difference (€75) on the futures market. Considering storage costs and the price at which he finally sells his maize, as can be seen from the following table, his total gain is €17/T.

	September	December	Total
<b>Buying and selling of the maize</b>	Buys the maize for €150/T	Sells the maize for €100/T	-50€
<b>Action on the futures market</b>	Sells a maize futures contract at €200/T	Buys a maize futures contract at €125/T	+ 75€/T
<b>Storage costs (€2/T/month)</b>	---	-8 €/T	-8 €
<b>Total</b>	+ 50€/T	- 33 €/T	+17€/T

30 Buying and selling on the futures market involves betting on one of the following possibilities:

a) When an actor buys a futures contract ("long position"), he is betting on a rise in the price of the merchandise to which the contract refers. He is a buyer who expects to gain through a rise in the price of what has been bought.

b) When an actor sells a futures contract ("short position"), this means he is betting on a fall in the contract price.

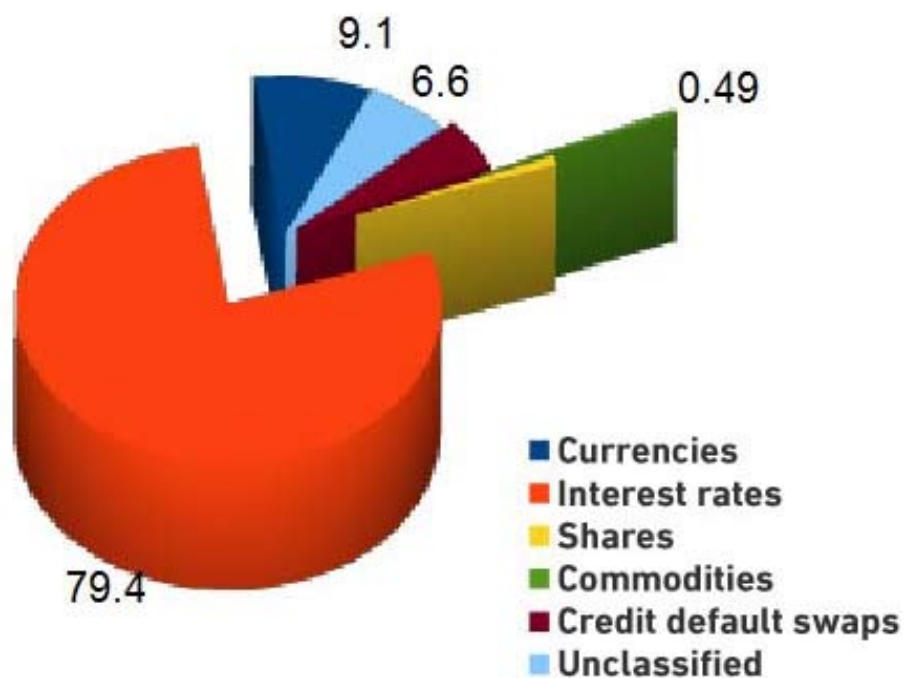
## Annexe 2

### How are OTC operations carried out?

A bank creates a specific derivative product, suited to its client. Since the creation of the product is done privately, no-one on the outside knows what is being traded, or at what price. Such that a derivative may be estimated at too high a price (manipulated) or estimated at too low a price if all the risks are not taken into account. A large part of the 2007-2008 economic crisis was tied in with bad debts on derivative product contracts in this space. Lehman Brothers is an extreme example: the firm was a counterpart to 134,000 derivatives of very different types, but did not have the financial ability to take them on or insure them at the time of its collapse in September 2008 (WDM 2010c).

It is estimated that Goldman Sachs, J.P. Morgan, Bank of America, Citigroup and Morgan Stanley control 96% of the 293 million million dollars' worth of OTC derivatives which were traded by 25 U.S. banks in 2009. In the European Union, the main actors in these markets are: Credit Suisse, Deutsche Bank, HSBC, Rabobank and UBS (SOMO 2010, 5). From chart 4 one can appreciate the magnitude of the OTC transactions carried out in 2010. Although the basic products represent only 0.49%, their volume is 2.85 million million dollars.

**Chart 5**  
**Distribution of OTC derivatives**  
(total figure: 582 million million dollars)  
Percentages at June 2010



Drawn by the authors from BIS 2010

### Some financial instruments that enable speculation

There exist a large number of opportunities for food speculation on the financial markets. Thus for example, we can cite: **Managed futures funds**, run by financial managers, which use computer-calculated algorithms to estimate the evolution in prices; and Collateralised commodity obligations (CCO's), a relatively sophisticated sort of hedging instrument resembling debt bonds guaranteed by the prices of raw materials (Lines 2010).

Here we shall highlight the **swap**, which is one of the commonest. It is a product offered by investment banks to their clients, resembling a loan which the client makes to the bank. It consists of an agreement between the two parties that takes place not on the exchange (regulated market), but rather in the private, or OTC, space.

How does one speculate with a swap? The bank invests the client's money by buying primary materials futures contracts on the exchange. With the growth in this type of transaction, demand for futures increases, and prices rise – not only those of futures but also those of basic products. The money which the bank returns to the client is not determined in advance. It varies according to the futures price of the primary material or of the group of primary materials to which it is linked by an index of the type we mentioned earlier (SOMO 2010, 7). Hence, gains are made here by betting on price rises.