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### **The Food Crisis in Context: More than a Problem of Speculation**

As the Western media was preoccupied by the global financial crisis in 2008, another crisis that had erupted tended to be overlooked: food prices surged upwards leading to food riots in over thirty countries. “The ranks of the world’s hungry had increased by 250 million in a single year, the most abysmal increase in all of human history” (Kaufman 2010, 28). Though food prices abated thereafter, they soon began rising again and by January 2011 had surpassed their 2008 peak, inspiring the G20 to place ‘food security’ alongside ‘fixing global finance’ as their top 2011 priorities (The Economist 2011). In order to prevent further drastic rises in food prices, it is imperative that the underlying causes of the food crisis be understood. This paper will look at why food prices spiked in 2008 and why they are inflating again. The food crisis is a result of a culmination of supply constraints, including the displacement of food production by the cultivation of biofuels, speculation, and trade liberalization policies of neoliberalism that have resulted in income deflation and increased inequality within and between nations (Patnaik 2008). The crisis raises fundamental questions about the viability of the current food system and how much hunger and inequality we are willing to tolerate.

Agriculture has played a central role in capitalism with agricultural revolutions leading to food surpluses central to each of the phases of Dutch, British, and American hegemony (Moore 2010, 397). Every leap forward in agricultural productivity has made our interaction with nature more capital intensive through expansion of new frontiers and technological innovations. In the seemingly endless process of capital accumulation

“every limit appears as a barrier to be overcome” (Marx 1941, cited in Harvey, 2010, 47). Circumventing barriers to capital accumulation has provided the conditions necessary for revivals of profitability. However, every jump in productivity has also tended toward overproduction, creating downward pressures on prices (Murphy 2008, 531). Cheap food lowers the price of labour, as minimum wages are conditioned by food prices, and as such, agricultural revolutions have coincided with massive demographic expansion and massive proletarianization (Moore 2010, 395). Agricultural revolutions have enabled less people to produce more food, freeing up larger portions of the population for wage labour in other sectors of the economy. Cheap food has been central to the development of capitalism.

In the United States, the tendency for overproduction motivated the implementation of price supports and subsidies beginning in the Great Depression with Roosevelt’s Agricultural Adjustment Act of 1938 (Weis 2007, 63). Food surpluses were directed toward export markets as domestic agro-food sectors experienced considerable increases in yields from the 1960s to 1980s with innovation in fossil fuel-based inputs and mechanization. Throughout this period the problem of overproduction that drove down prices seemed to be the ‘curse’ of abundance: between 1950 and 1990 global output in cereals nearly tripled and food prices fell (Weis 2007, 17). It seemed that food security was no longer an issue as high supply meant low prices. However, while this was certainly the case, taking the world as a whole, the disaggregated picture was more troubling. While this food surplus facilitated rapid urbanization as people moved from surplus producing rural regions to surplus consuming urban ones (Moore 2010, 399), hitherto developing country governments had sought to promote the mechanization of

agriculture through the Green Revolution, but by the 1990s they were pursuing trade liberalization through rounds of the General Agreement on Tariffs and Trade and subsequently through the World Trade Organization instead. While developed countries supported their domestic agro-food sectors through subsidies and tariffs, developing countries were prodded to open their agricultural sectors to international market competition.

Colonized land had long been used for extractive production of primary or tropical products that fueled European capitalism (McMichael 2009b, 32). With the waves of independence following World War II, the newly independent countries made efforts to establish new markets and trade networks in defiance to the colonial international division of labour. Attempts at self-sufficiency went beyond import substitution industrialization to include food security, however, many developing countries faced pressure to abandon the self-sufficiency and food security projects they had undertaken. Throughout the 1970s credit was widely available for large development projects that increased debt in many developing countries. When interest rates were increased in the late 1970s this debt became unsustainable leading to defaults, as indebted governments “were not earning sufficient foreign exchange in order to meet their debt (or interest) payment obligations” (Kiely 2005, 96). In order to refinance their debt obligations through the International Monetary Fund, these countries were required to implement ‘structural adjustment programmes’ that meant the implementations of neoliberal policies of privatization, trade liberalization and deregulation. Since the 1980s, governments have been pressured to promote exports in order to earn foreign exchange with which to purchase imports – including food (Kwame Sundaram 2008, 4). The

conventional belief in free markets has resulted in an emphasis of export crop production rather than self-sufficiency. Cheap food led many developing countries to reorient toward export markets or to neglect investing in their agricultural sectors altogether (Kwame Sundaram 2008, 5). This shift away from food security policies rested on the assumption that food prices would remain low.

Export-oriented agriculture was formalized when, in 1995, under the justification of ‘comparative advantage’, the World Trade Organization’s Agreement on Agriculture outlawed price supports and required deregulation (McMichael, 2009a, 287). Implementing the policies prescribed by the AoA has resulted in many food secure nations becoming food dependent – 70 percent of the countries of the global South are net food importers (McMichael 2009b, 41). This contrasts with the double standard of the developed countries that continue to disregard these rules. Government protection and support in the United State, European Union and Canada has resulted in concentration of subsidized agribusiness firms while less capitalized farms are constrained by rising input costs and mounting debt loads (National Farmers Union 2010). These imbalances set the context for the current crisis. Increased demand, biofuels, and speculation are the three conventional explanations of the 2008 food crisis, but these explanations need to be examined in the light of the policies of neoliberalization within the capitalist mode of production.

### **Increased Demand, Decreased Supply**

One widely canvassed reason for the rise in food prices is the rise demand for food among populous and increasingly prosperous countries like India and China. This was the explanation provided by then-President George Bush Jr. in May 2008, stating

“there are 350 million people in India who are classified as middle-class. That’s bigger than America...and when you start getting wealthy, you start demanding better nutrition and better food so demand is high and that causes the price to go up” (Shiva, 2008) A corollary of this explanation is that there has also been an increase in demand for animal food products (which require more foodgrain production per calorie) among a rich minorities in these countries. This claim points to the increase in demand of the 1 billion ‘new consumers’ in middle-income countries, particularly China and India (McMichael 2009a, 282). This explanation does not hold as both “aggregate and per capita consumption of grain have actually fallen in both these countries” (Ghosh 2010, 72). In reality, the increase in demand that might theoretically be related to GDP growth was canceled out by falling incomes of much of the populations of China and India (Patnaik 2009, 4). Certainly there was no increase in demand significant enough to explain the substantial price increase in 2008. If demand changes cannot explain the drastic increase in food prices, we must look to the supply-side.

*The Economist* suggests that food production will have to rise by 70 percent by 2050 in order to keep pace with population growth, changes in diet and urbanization (The Economist 2011). However, the opposite appears to be happening: world output growth was sustained by China and India from 1980-2000, but since 2000 there has been stagnation on foodgrain output, thus a decline in per capita output (Patnaik 2008, 15). Rising costs of inputs, the negative productivity impacts of soil and aquifer depletion, inadequate public investment in agriculture research and extension, and the impacts of climate change have all affected harvests in different ways around the world (Ghosh 2010, 73). Malthusian fears are awakened in some, who claim that, despite environmental

impacts, intensification is our only hope for feeding 9 billion people (*The Economist* 2011), while others are concerned with the ecological limitations of industrial agriculture and its heavy dependence on fossil fuels.

### **Biofuels**

Policies that promote the production of biofuels, such as ethanol and biodiesel, seek to supplement fossil fuel needs. *New Scientist* reported “the corn required to fill an SUV tank with bioethanol just once could feed one person for a year” (Tokar 2010, 124). Biofuels convert food into an (inefficient) energy input in a time of rising prices. In fact, high food prices have made the production of biofuels uneconomical for many producers, the largest of which in the US, VeraSun, went bankrupt in 2008 (Tokar 2010, 136). After a failed merger with VeraSun went bankrupt along with several other smaller biofuel producers, leaving contracted farmers sitting on their crops (Jonasse 2009, 5).

Considering the fossil fuel energy that goes into the production of these crops and in their transformation from food to fuel, the motives behind the recent government support for them are questionable. The EU and US subsidize biofuels – 45 cents per gallon in the US – and 80 percent of all US government support for renewable energy is directed toward biofuels (Tokar 2010, 135-136). The US government subsidy for biofuels will approach \$100 billion for the period of 2006-2012 (McMichael 2009a, 289). US biofuel mandates of minimum production levels cannot be met by domestic production and thus require imports from Southeast Asia and Latin America (McMichael 2009a, 292). While the main justification for this investment is to decrease dependence on fossil fuels, biofuels provide a questionable technological “fix” that allows the perpetuation of energy-

intensive practices such as fertilizer dependence, shipping food thousands of kilometers, or driving to the grocery store.

As food production and biofuel production compete for land (McMichael 2009a, 283), there are also class consequences as the Mexican ‘tortilla crisis’ of 2007 exemplifies: while the American agribusiness and food processing conglomerate Archer Daniel Midland (ADM) profited from subsidized biofuel production in the US, it also benefitted from high prices of tortillas in Mexico. ADM also holds 27 percent ownership of Gruma, Mexico’s largest tortilla manufacturer, and a 40 percent share in a joint venture with Gruma to mill and refine wheat. Whether Mexican consumers paid more for tortillas or switched to white bread because of high tortilla prices, “ADM and Gruma still win” (Phillpott 2007). The tortilla crisis of 2007 was the consequence of white corn, (usually the most socially desirable corn for tortillas) being diverted to use in cattle food as yellow corn (usually used as feed) was converted to biofuels (McMichael 2009a, 289). This diversion of food to fuel has had negative impacts on working class populations’ access to food due to rising prices, the impact of which is felt particularly strongly among the poor.

The benefits of diverting food to fuel are questionable even in the case of the most ‘efficient’ biofuels producer, Brazil, which uses sugar cane rather than corn to produce ethanol. Half of Brazil’s sugar cane production was used to produce biofuels in 2007 and it has been argued that this has prompted large-scale deforestation of the Amazon (Ghosh 2010, 73). Ironically, using fossil fuel powered machinery and fossil fuel derived fertilizers while clearing carbon-sequestering trees to create space for sugar cane production may exacerbate greenhouse gas emissions. Biofuels currently do not represent

a viable sustainable energy source, however US and EU commitments to biofuels, questionable as they are, have been a factor in the current rise in food prices.

According to the FAO, US corn ethanol explains 33 percent of the rise in the 2008 world corn prices and 70 percent according to the IMF, while the World Bank notes that the prices of biofuel crops rose far more rapidly than those of other foods (McMichael 2009b, 42). Constrained per capita world output in foodgrains is only worsened by the diversion of food to fuels due to these policies. The dramatic rise in food prices occurred “even though 2008 turned out to be a year to record grain production internationally” (Ghosh 2010, 75). This rise is difficult to explain without taking into account some role of speculation.

### **Speculation**

The rise steady rise in food prices peaking in 2008 was dramatic enough to cause an increase of more than two and a half times in the traded prices between December 2007 and June 2008 (Ghosh 2010, 77). Prices for rice, grains and corn, and oilseeds peaked in 2008 and subsequently fell to similar price levels of early 2007. Although primary commodity prices are historically volatile (Ghosh 2010, 77), these drastic jumps in prices – which cannot be explained by supply and demand factors – are related to increased speculation in commodities due to deregulation in finance.

In theory, speculation should stabilize markets “because speculators are supported to buy when prices are low and sell when prices are high, they thereby serve to make prices *less* volatile” (Ghosh 2010, 75; emphasis original). In agriculture, commodity exchanges have long used forward contracts as a way to lower transactions costs and manage risk. Commodity exchanges allowed for open-market price discovery through the



buying and selling of commodities on regulated public exchanges (Ghosh 2010, 77). Forward contracts allowed farmers and producers to focus on production rather than worry about drastic price changes because futures assured them their product would receive a specified price. A promise to buy future wheat (“long” position) would eventually need to be met by an equal and opposite promise to sell (“short” position) and assisted in maintaining a liquid market (Kaufman 2010, 30). Even with the presence of speculators who never intended to obtain these commodities, the futures market price could never move far from the actual (“spot”) price because as delivery dates approached, each individual would be required to clear their position and the prices would converge (Kaufman 2010, 30). Keynes called this ‘normal backwardization’ as futures prices normally remained stable and in back of actual spot prices (Kaufman 2010, 30). This all changed in 1991 when Goldman Sachs introduced its Commodity Index.

This commodity index does not function with convergence between speculative and spot prices because no commodity is ever exchanged. These indices require index-fund managers “buy at any price and *keep* buying at any price” because there are no delivery dates and contracts keep rolling over (Kaufman 2010, 30; emphasis original). This is profitable for Goldman Sachs and other financial institutions because only a portion of the contract is deposited so “for every dollar a client invested in the index fund, Goldman Sachs would buy another dollar’s worth of the underlying commodities futures (minus management fees)” (Kaufman 2010, 31). Purchasing commodity futures only required a deposit of about 5 percent, leaving Goldman Sachs with 95 percent of the investors’ money to purchase Treasury Bills or other low risk investments that could be used as leverage in other financial endeavours (Kaufman 2010, 30). Goldman Sachs and

other financial institutions need only to convince investors that food is a good investment – especially in bad times. As long as contracts are rolled over, Goldman Sachs continues to extract profits and management fees without the risks associated with conventional commodity futures markets.

In 2000, the Commodity Futures Modernization Act deregulated commodity trading by exempting over-the-counter (OTC) commodity trading from Commodity Futures Trading Commission (CFTC) oversight and removing limits on the amount of futures contracts speculators can hold (Kaufman 2010, 31). This allowed any investor to trade any amount of contracts without disclosure or regulatory oversight. In 1995 the limit of futures contracts that speculators could hold was 5,000; in 2000 it was raised to 130,000 (Kaufman 2010, 31). The value of such unregulated trading soon reached \$9 trillion, estimated to be twice the value of commodity contracts on regulated exchanges (Ghosh 2010, 78). These exchanges are no longer a mechanism for actual producers and consumers to hedge their risks but a haven for financial capital that has been pulled out of the mortgage, credit and real estate markets. Financial firms and speculators seeking short-term profits through price changes are aided by the ‘swap-dealer loophole’, which allows traders to use swap agreements to take long-term positions in commodity indexes without ever physically owning the very real commodities involved (Ghosh 2010, 78). Even in commodity exchanges regulated by the CFTC, it was estimated in a testimony to the US Congress by the hedge fund manager Michael Masters in April 2008 that speculative investors owned 35 percent of all corn futures contracts, 42 percent of all soybean contracts and 64 percent of all wheat contracts (Ghosh 2010, 78). These estimations do not include OTC commodity trading and show the extent to which

commodity futures have become a class of financial asset rather than a means for producers and consumers to mitigate risk.

The only beneficiaries of this system are investors and investment firms. Rather than the financial backwardization described by Keynes, the commodity exchanges were in *contango* for much of the period between January 2007 and June 2008 (Ghosh 2010, 79). This means that futures prices were higher than spot prices and implies that speculators are expecting to profit from rising prices. “Indeed it has been argued that contango was so strong that the futures markets were essentially driving the spot prices up in this period” (Ghosh 2010, 79). Even after commodity prices fell from their 2008 peak, prices consumers paid for food did not fall as manufacturers and retailers continue to make up for their losses (Kaufman 2010, 28). Far from stabilizing commodity prices, the deregulation of commodity exchanges has resulted in excessive instability and volatility that has had negative impacts on both producers and consumers: farmers’ decisions regarding sowing and harvesting were affected by misleading market signals while high food prices were passed on to consumers, particularly in developing countries (Ghosh 2010, 79). The decoupling of food prices from production costs means that a food bubble could occur again – as seems to be the case.

Speculation has not resulted in an increase in supply, which points us toward longer-term structural issues in order to explain more fully the drastic rise in food prices. In order for speculation to occur, there need to be inflationary expectation due to scarcity in the real commodity markets (Patnaik 2008, 13). If there was or is a real scarcity in the market, why is there no supply response?

### **Structural Issues**

To answer the question of why the increase in food prices was not met with an increase in supply, we must consider the logic of capital accumulation. As capitalist agriculture has expanded it has relied upon the capitalization of nature and labour as ‘solutions’ to waning profits and underproduction (Moore 2010, 409). Rapid supply increases are difficult in agricultural processes that are rooted in time and space. Keynes noted in 1919 that the closing of the frontier marked a turning point in the history of capitalism (Patnaik 2008, 8); given that today there is not much freely available land to be broken for cultivation, extensive growth is not a viable option to increase supply. Farmers may seek to expand intensively, but limited access to credit, rising input costs, and inadequate investment in agriculture has constrained the ability of developing countries in particular to increase production.

Rising costs of energy and inputs also reinforce the tendency toward declining profit rates that pose challenges for increasing food supply. It is uncertain where the next ‘yield honeymoon’ – where little capital investment leads to a huge jump in agricultural productivity that results in large amounts of food – can be found (Moore 2010, 400). In previous agricultural revolutions the introduction of old crops to the New World and new crops to the Old World saw food surpluses that established the conditions for long waves of accumulation (Moore 2010, 400). The application of fertilizers and mechanization of agricultural production have not been able to maintain productivity increases.

Biotechnology has been suggested to be the next frontier in agricultural innovation but has thus far done little to improve yields. The agricultural biotechnology firm Monsanto has even gone so far to state that “the main use of GM [genetically modified] crops are to make them insecticide – and herbicide – tolerant. *They don’t inherently increase the*

*yield*. They protect the yield” (Moore 2010, 400). The development of genetically engineered organisms has so far been unsuccessful in controlling nature, but has been ‘successful’ in further differentiating classes of farmers through creating new forms of property at a genetic level. Rather than a bounty of ecological resources ready for appropriation, agriculture today faces ecological exhaustion as every leap forward in productivity has meant a leap forward in toxification (Moore 2010, 408). The unsustainability within the logic of endless capital accumulation can be summed up: no ecology, no economy.

The challenge of increasing supply within this context sees developing countries pinched “between volatile global prices on the one hand, and reduced fiscal space and depreciating currencies on the other hand” (Ghosh 2010, 85). This limits the flexibility in policy responses that might act to reduce volatility in food prices. In economies where the vast majority of wages are not indexed, substantial increases in food prices have a major impact on access to food making the food crisis a matter of concern. Rising inequality in India, China and most of the rest of the developing world has been related to income deflation in these countries.

Income deflation entails suppressing demand rather than addressing supply. The neoliberal policies of trade liberalization, the reduction of state expenditure and the concentration of agribusiness have all acted to deflate real incomes in developing countries in particular (Patnaik 2008, 5-7). The need for capital accumulation under capitalism requires surplus value be invested through expansion and if expansion is not possible, through encroachment, “*which is based not on balanced but on uneven development of the different segments of the world economy*” (Patnaik 2008, 12;

emphasis original). Globalization has been used as a justification for the implementation of income deflating policies in the name of competitiveness.

Income deflation plays an equivalent role to that of inflation in compressing demand (Patnaik 2008, 2). According to conventional economic theory, inflation refers to a situation in which all prices, including money wages, are rising, “so that there is no worsening of the condition of the working passes *per se* and the only sufferers are those with cash balances, most of whom are likely to be rich” (Patnaik 2008, 2; emphasis original). However, in practice, when the majority of wages are not indexed to prices, it is working people who are hurt by inflation. Keynes called this ‘profit inflation’ as it overcomes excess demand by raising prices relative to money wages thus resulting in a shift in income distribution from wages to profits (Patnaik 2008, 2). This reduction of demand could also be achieved through direct deflation of incomes, the preferred method of compressing demand for financial capital, as profit inflation requires a decline in the real value of financial assets compared to commodities (Patnaik 2008, 3). Rather than increase supply, income deflation works to compress demand, as has been occurring over the past thirty years.

The decline in world per capita cereal output from 1980 to 2000 occurred while world per capita income increased. But this did not result in inflation in cereal prices but rather in falling cereal prices thus suggesting that the decline in per capita cereal output “did not generate any specific inflationary pressures on cereal prices” (Patnaik 2008, 3). Rather, income deflation policies have suppressed demand through three processes: reductions in government expenditure, the destruction of domestic productive activities, and shifts in the terms of trade against particular commodities and producers.

In the current 'global' economy, governments under the threat of capital flight have moved away from interventionist domestic policies. Fiscal responsibility limits the size of government debt to GDP, while the removal of trade barriers and reduction of tax-GDP ratios seek to create attractive locations for capital investment. These neoliberal policies minimize government spending, in particular welfare expenditure, transfer payments and public investment expenditure, removing purchasing power from working and rural populations (Patnaik 2008, 6). The destruction of productive capacities can result from trade liberalization under global competition. Sudden inflows of speculative capital can push up the exchange rate or cheap imports can push domestic production out of business (Patnaik 2008, 6). Shifts in terms of trade can be both a cause and caused by an income deflation of petty producers as changes in terms of trade may occur due to changes in supply and demand or through shifts away from smaller producers toward larger ones (Patnaik 2008, 7). These measures have sought to compress demand in large part because of the limited scope for extensive expansion of agricultural production to increase supply.

The food crisis cannot be seen as an anomaly that occurred in 2008, rather, it points to the tendency of capital accumulation to reach limits within the capitalist system. The history of capitalism has been a story of the displacement of peasants from their land and means of production (Patnaik 2008, 10). This has been done by accumulation through expansion in new direction and accumulation through encroachment (Patnaik 2008, 10). As accumulation through expansion runs up against physical limits, accumulation through encroachment has seen redistribution from poor to rich under neoliberal policies of trade and financial liberalization. Neoliberalism was successful, for a time, in delivering cheap food: "cheap to the extent that it reduced the 'value' of

commodified labour power, and augments capital's capacity to extract surplus value" (Moore 2010, 397). However, wealth redistribution from poor to rich under neoliberalism has not created the conditions for a new wave of accumulation let alone stable economy growth. The food crisis must be seen in connection with the physical and productive limitation that capital accumulation in agriculture has come up against – and this must be seen as intimately related to the financial crisis. Speculative investors are moving toward commodities not only because of the financial crisis but also because of inflationary expectations that are based on an actual constraint in supply (Patnaik 2008, 13). The ecological constraints of food production signify limits to encroachment and, in combination with increasing opposition to income deflation (i.e. in Tunisia, Egypt and across the Middle East), represent the inherent contradictions within the logic of capital accumulation.

### **What is to be done?**

Addressing the issue of speculation, which has exacerbated the structural causes of the food crisis, is a start. Through the re-regulation of commodity exchanges and financial controls, the disjuncture between speculative and stop prices can be addressed and limit the possibility of food price bubbles. The removal of agricultural subsidies and dumping policies by developed countries is the next step. In both developed and developing countries income supports are an option to ensure farmers an adequate livelihood. Governments need to invest public spending into agricultural research and extension so that the future of food is not in the hands of agribusiness.

With the mounting environmental challenges of soil erosion, water table depletion, resistance to pesticides, and climate change, there are many opportunities for



agroecological practices to be applied to food production on a wider scale using natural resources efficiently and sustainably. Given the dubious environmental benefits of biofuels and that the diversion of production from food crops to fuel crops has exacerbated the food crisis, governments should redirect their renewable energy funding to other initiatives. Agricultural dependence on fossil fuels remains significant and the impact of rising oil prices will continue to affect farmers' input costs and result in increasingly unsustainable debt loads. The potential for technological growth remains, but the lack of public investment in research and in farmers who are most able to innovate puts limits on the capacity for innovation.

Domestic policies have allowed some countries to weather high food prices better than others, signifying the importance of flexibility of countries to implement domestic policies that benefit their citizens: this flexibility is determined by both the external environment and the country's integration into the global economy (Ghosh 2010, 83). Countries such as India and China have institutional arrangements in place that have promoted domestic food supplies, while food-importing countries have been more vulnerable to jumps in food prices. "The lesson here is unpleasantly straightforward: no country, however small and open, can afford to neglect domestic food production and must ensure at least some domestic supplies, if it does not want to get caught in a vortex of price volatility that can dramatically affect national food security" (Ghosh 2010, 83). In response to instability in food prices, some developing countries have diverted their domestic policies away from the aggressive trade liberalization mandated by the WTO rules and have reduced or suspended import tariffs and taxes, implemented export

restrictions, provided credit and agricultural inputs to domestic producers, or intervened heavily in food markets to stabilize prices (Ghosh 2010, 84).

The potential for a flexible domestic policy toward agriculture depends highly on a country's financialization, revealing the interdependency of the food crisis and the financial crisis. Domestic policies to support local food production require fiscal resources. China has managed to stabilize its food prices due to its domestic policies as well as its fiscal strategy and control over financial flows through its large state banking sector and capital controls (Ghosh 2010, 84). Many developing countries are constrained by deficits and find themselves with conditional access to international credit markets. Yet food-dependent countries need foreign exchange to purchase food imports. As food imports are mostly denominated in US dollars, these countries have to earn foreign credit through exporting in order to import more food. Trade and financial liberalization mandated by the International Monetary Fund and the World Trade Organization have required the lifting of capital controls and barriers to trade risking currency depreciations relative to the US dollar due to capital flight – even if these countries appear to have strong GDP growth (Ghosh 2010, 85). Trade liberalization and financial deregulation within the current international economy limits the ability of developing country governments to implement responses to both price instability and provide the longer-term intervention into agriculture necessary to address the food crisis.

With the current crisis, food sovereignty is a concept that seeks to go beyond food security to frame food as a right while prioritizing local production when possible (Rosset 2011, 22). Social movements such as Vía Campesina movement are seeking to protect the interests of farmers and peasants and promote effective distribution. The era of cheap

food appears to be over and hopefully the benefit of this will be an opening of policy options that were restricted under the justification of ‘globalization’. Because of the concentration of both wealth and capital in developed countries, addressing the issue of food sovereignty entails a critical look at the international division of labour in order to address inequality within and between countries. Progressive alternatives provide options for moving toward food security and food sovereignty.

The short-term explanations of the food crisis cannot fully explain the rise in prices in 2008 or the rise in prices today. It is not from increased demand from India or China but from the declining rate of growth of the supply of foodgrains that explains the rise in food prices. Biofuels have only exacerbated this supply constraint by diverting food to fuel. Speculation, facilitated by the deregulation of commodity indexes, has caused speculative food prices to actually push up actual food prices leading to a contango market in 2008. This is now widely accepted. Speculation, however, requires that there be inflationary expectations about the price of food, *and this requires an actual constraint in supply*. Why this constrain has not been met with an increase in supply is due to the limitations to capital accumulation that have been mounting and the complex responses to these barriers. Income deflation has been imposed through reduction in government spending, destruction of domestic production and shifts in terms of trade against petty producers. Limits to accumulation through expansion do not mean that technical innovation in agriculture cannot create new means of agricultural productivity increases. However, the impact of income deflation and accumulation through encroachment has stripped the very agency for technical innovation from the majority of farmers. In some countries, such as India, “income deflation has taken its toll on the

peasantry to a point where even simple reproduction of the peasant economy is no longer possible...as is evident from the mass suicides of the peasants” (Patnaik 2008, 16). The food crisis must be seen as part of a larger crisis of capital accumulation that has real human and ecological consequences.

Thirty years of neoliberalization has put too many farmers out of business. This has resulted in increased reliance on food imports which are vulnerable to price increases because of the deregulation of financial markets. The food crisis is especially appalling considering that the hungry are increasing even though there is enough food in the world to feed everyone (Kwame Sundaram 2008, 1) – but there is no money to be made in distributing food to people who cannot afford it. Thus, through the reregulation of commodity exchanges and capital controls, as well as public investment in ensuring agricultural livelihoods in both developed and developing countries, we can begin to address the root causes of the 2008 food bubble and prevent further food price bubbles. These possibilities, in conjunction with agroecological practices that take ecological limits into account, can provide the basis for a just food system in which the incomes of the poor are not deflated to respond to increased demand.

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