



The food business environment and the role of China and Brazil building a “food bridge”

Food business environment

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Abstract

Purpose – The purpose of this paper is to discuss the economic crisis of 2008/2009 and the major impacts on developing nations and food-producing countries. Within this macro-environment of food chains, there is concern that food inflation might come back sooner than expected. The role of China as one of the major food consumers in the future, and Brazil, as the major food producer, is described as the food bridge, and an agenda of common development of these countries suggested.

Design/methodology/approach – This paper reviews literature on causes of food inflation, production shortages, and investigation of programs to solve the problem in the future, it is also based on author’s personal insights and experience of working on this field in the last 15 years, and recent discussions in forums and interviews.

Findings – The major factors that jointly caused food prices increase in 2007/2008 were population growth, income distribution, urbanization, dollar devaluations, commodity funds, social programs, production shortages, and biofuels. A list of ten policies is suggested: horizontal expansion of food production, vertical expansion, reduction in transaction costs, in protectionism and other taxes, investment in logistics, technology and better coordination, contracts, new generation of fertilizers and to use the best sources of biofuels.

Originality/value – Two major outputs from this paper are the “food demand model” that inserts in one model the trends and causes of food inflation and the solutions; and the “food bridge concept” that also aligns in one box the imminent major food chain cooperation between China and Brazil.

Keywords Food industry, Agricultural products, Economic sustainability, Biotechnology, China, Brazil

Paper type Literature review

1. Introduction and the world economic/financial crisis

This paper is divided into four major parts. The first is a view about the world financial and economic crisis and the impacts in food business and emergent nations. The second part is to call attention towards a problem that will come back sooner than expected; that is, the increasing demand for food and as a consequence, increasing food prices. The third part is a proposal on how society should work together in an integrated agenda for development, to try to solve the emerging food problem; and, finally, comments are offered on the roles of China and Brazil.

The economic crisis of 2008/2009, in a very simplistic view is the crisis of the three Cs. The first C is credit. In recent years, because credit was given to consumers in a very irresponsible way by financial institutions in several countries, an artificial market was built. It was an era of financial leverage, financial strategy, and financial dominance. Several companies joined in this festival, building up very risky positions,



JEL classification – E40, E62, L67

paying unrealistic salaries and dividends, and neglecting costs. When this festival started eroding, adjustments were needed.

The second C is consumption. Consumption was done in an irresponsible way by society, also in several countries. The abundant offers of credit encouraged a large amount of consumers to buy what they could not afford, with loans for houses, cars, equipments, etc. Anyone could see that this consumption would not fit the monthly budget of families. But the festival was there. Now, it is time to reduce leverage, to sell what was bought, with a lot of loss, since prices of assets (houses, cars, and others) went down.

The third C is confidence. The first two Cs made society lose confidence in the system, in companies, and even in governments. Economic recovery is related to confidence. This will not be easy and will be different from country to country. Owing to the crisis, where at the beginning and end could not be seen, several consumers who can consume, lost confidence, and stopped consuming. With lower sales, markets reduce, employment reduces, and this leads to lower consumption, lower sales, unemployment with a negative cycle effect, bringing deeper crisis. The speed of “confidence recovery” is what is going to take economies out of this crisis. The economic situation will get better well before the financial situation, since it is not known yet what is still to come in terms of bad credits. However, risks of a total financial collapse were mitigated.

Together with economic and financial crisis, the world faces, in 2009, an increasing political crisis, or related to governments utilizing the wrong political and economic measures, taking countries to bankruptcy; governments being removed; and an increasing threat of instability regarding nuclear weapons and other issues, such as missile testing and arming nations. This fact is also disturbing markets and disturbing consumer confidence and makes part of the environment where food chains operate.

It is very important to know that the 2009 world crisis cannot be generalized. It has had very different regional, country and industry impacts. As an example, some industries in Brazil achieved sales records, in food, cars, and housing. Some industries, like heavy equipment, suffered the worst crisis in 20 years. Some areas of countries, some cities, suffered more, and others less. Some countries suffered more (Germany, with a 5 percent decrease in gross domestic product (GDP)) and some, less (China, with a 6 percent increase). The USA will still suffer due to a high leverage of its consumers. Predictions for European recovery are worst than for the Americas and Asia.

Another point that contributed to a faster recovery of economic situation after the crisis was the enormous market power shift in the world. The emergent economies, in some way, have already changed the world. The Brazil, Russia, India, and China (BRIC) group is expected by Goldman Sachs (2009) to have a higher GDP than the G7 in 2027. Between 2000 and 2005, the BRIC GDP went from US\$3.6 trillion towards almost US\$5 trillion. Brazil had an average growth from 2000 to 2009 of 3.1 percent/year, and an accumulated variation of 36.3 percent in the period 2000/2009. China had an incredible 9.6 percent of average and 151 percent accumulated. India comes with 6.9 percent of average and 94.6 percent accumulated and finally, Russia had 5.5 percent of average growth (2000/2009) and 71.2 percent accumulated (International Monetary Fund, 2009).

The GDP of emerging nations was 11 percent of the world in 1991, was 30 percent in 2008, and expected to be 50 percent in 20 years. Population in 2050 is expected to be nine billion people, and only 10 percent will be at the developed nations. In 2009, there

were around 200 million people in the emerging nations having an income of US\$3,000/year, and this will move to two billion people in 15-20 years. So, there is no question that a huge shift has happened in the last ten years. New consumers and new markets are diversifying the world. This shift will gain more and more speed and will be accelerated by the effects of the web, with faster technology and knowledge transfer.

The GDP in large food consumers like China and India continues to grow, contributing to a maintenance and even increase in consumption. Goldman Sachs expects China to grow 7-8 percent in 2009 and 11 percent in 2010; and India with 6-7 percent in 2009/2010. Almost 60 percent of the world's economic growth in the period 1999/2009 was in the developing nations, being 30 percent at the BRIC. The World Bank estimates that in 2009 the world economy will reduce in 2.9 percent, a growth of 2 percent in 2010, and 3.2 percent in 2011. Half of this growth will come from the emerging nations and markets.

Those countries that are heavily dependent on the USA, as a importer, or on tourism, and on flows of money coming from population working abroad are suffering more than the traditional food and commodity producers and exporters, for example, Brazil, Uruguay, Colombia, Argentina, and others. Brazil is a country well known as a large food and biofuels exporter. Food is more resilient to crisis since food is the last thing to be cut from a family budget, and coming to the developed world, food demand elasticity is low. The hit was more on markets of higher value sectors.

Owing to several situations, Brazil is not facing this crisis as faced in other situations in the past. Part of this is responsibility of the Real Economic Plan, launched in 1994, that brought economic stabilization. As an example, supermarket sales in April 2009 were 6.5 percent higher than April 2008. The economy was growing around 4-5 percent per year in the last years, and will reduce to probably 0.5 to 1 percent in 2009, and there is a common accordance that it will be back to 3-4 percent in 2010. Goldman Sachs expects a 5 percent increase. The country has a small share of general global trade (it is only important in the food and commodity trade) and was less impacted than other exporting-driven economies. A large internal consumption market, tough adjustments done in the past in the banking and financial system towards credit exposure, a high level of international reserves (stable on US\$205 billion – other countries like Russia, Mexico, and Korea lost reserves), a situation of energy security (self-sufficient in oil and with more than 50 percent of car fuel consumption nowadays coming from inland-produced sugar cane ethanol) and other factors contributed to this position. Only in May 2009, Brazil received US\$2.3 billion in foreign direct investment. The accumulated total for 2009 is US\$11.2 billion.

To finalize this first part, what are the messages for companies? There are several. Companies will need to focus more again, to return to their core business, have a very efficient use of capital and resources, and work even more on planning, collective actions and cost structure. Companies will also need to have a very close look at risk monitoring. It is an era of establishing global and more competitive supply chains and an area of strong value proposition for human talents in companies. Finally, it is an era of more conservative leverage and financing, and to take advantage of opportunities of consolidation, acquisition, mergers, and other, such as several opportunities for cheap asset acquisition in the world. The ones that have capital are faced in 2009 with an outstanding window of opportunity.

2. Food demand and the food inflation

The second part of this paper has to deal with a problem that came in 2007 and part of 2008 and will come back sooner than expected due to several factors. This problem is food demand and, as a consequence, food prices increase.

There are nine major factors that are changing and bringing pressure on capacity of supplying food to the world, and have relation to the economic and financial crisis:

- (1) Increase in areas dedicated for growing crops for biofuels. Several countries are starting production of biofuels, which in some is taking land used for food production. Now the tank of the car is a competitor of the stomach. Both want food. Many studies are only linking biofuels to the food inflation cause, ignoring several other factors, some of which we have known for a long time. Biofuels is not the major problem, since there are very positive results from biofuels being produced in areas together with increase in food production, but this factor should be considered.
- (2) The growth of world population, expected to reach nine billion people in 2050, is not a new factor, but it contributes to a higher need of food production. Food and Agriculture Organization of the United Nations (FAO/ONU; available at: www.fao.org) estimates that the world will need to produce at least 50 percent more food in the next 15 years. Projections of future demand for grains (2.2 billion in 2009 to 3.3 billion in 2025), milk (3.4 billion tons in 2009 to five billion tons in 2017), and meat are impressive. Just as an example, the Middle East and North African countries have a population of around 380 million today, and will have 510 million in 2025.
- (3) Economic development and income distribution in populated countries such as India, Brazil, Eastern Europe, China, Indonesia, Thailand, South Africa, Argentina, Arabian countries, African countries, among others, are exciting factors, bringing millions of new food consumers to the market. Several African economies are growing more than 5 percent per year in the last five to ten years. Experts in food consumption expect in the next ten years, an increase in 50 percent in food expenditure in China, 78 percent in India, 40 percent in developing Asia, Middle East and North Africa (Global Demographics, 2009). From a proportion of 60 percent/40 percent consumption in developed and emerging economies, in ten years, food markets will be 50 percent/50 percent. When one compares China's population with the country's participation in world trade, it is still less than 50 percent. There is a lot to come.
- (4) Stronger governmental programs for aid and food consumption, such as the one in Brazil reaching ten million families and 40 million people, new consumers coming to the food markets. Just as an example, the market for sausages in Brazil went from US\$0.5 billion in 2003 to US\$1 billion in 2007. Thailand has ten million people receiving a check of US\$58 per month. These are just some examples, happening in several parts of the world. Several signs are given, and they are not being captured in an adequate way by major economists.
- (5) Migration and urbanization of society bringing megacities, increasing food consumption and changing consumption habits towards less grain, and more protein (using more grain as feed in the animal production process). Consumption is getting more individually based, more sophisticated and more energy consuming. There is also a huge impact here, when you consider that in several

countries, 50 percent of population is still in rural areas, and moving to cities. A study done by McKinsey (Aston, 2009) estimates that until 2025 around 350 million people in China will move to cities. This will require five million buildings, demanding computers, televisions, air conditionings, and new food consumption habits (equivalent of ten cities the size of New York).

- (6) Oil prices went up from US\$35 to US\$140 in five years, impacting production and transport costs. It is rising again, and oil is not only used for transportation. It is also used in several other industries, such as plastics, that have increased consumption. Oil may be stable around US\$70-80 a barrel, and with oil prices up again, several possibilities and projects for biofuels gain economic incentives, increasing pressure for land in the case of corn and other grains. China had 65 million cars running in 2008 and is expected to have 150 million by 2020, consuming 250 million tons of gas/year (Xinlian, 2009).
- (7) The dollar devaluation that happened in recent years also contributed to higher commodity prices, fixed in US\$.
- (8) Production shortages (food supply). Farm/production shortages due to lower margins, climate, droughts and diseases are a major concern. Owing to credit crunch (lack of financing) and high-price fluctuations, there was a downturn in prices, the criteria of financial institutions became more severe, and together with losses from bad hedging by agribusiness companies brought loss of confidence. As a consequence, higher risks for planted area and yields, hedging prices got worst (less hedging), and consequently, more uncertainty, lack of confidence in long-term contracts. This may bring lower productivity, lower inventories, lower margins and farmers switching to producing cheaper crops. Some exporting countries will become importers and the 2009 crop will be smaller in several countries (expected 5 percent smaller global production). On this same topic, there is always the concern of availability of water and costs of water and also the unknown impacts of global climate change on crop productivity in the future. This point is a major concern.
- (9) Investment funds operating in futures markets and others in agribusiness. This increased with lower interest rates in several countries. It is known that some of these have been replaced by strategic investors with conservative financing mechanisms, but there is still a movement of funds towards food commodities. This is also increasing consolidation.

In a 2008 speech, ONU General Secretary Ban Ki Moon asked that food production be doubled towards 2030. According to FAO, even with the reduction of hunger in the world (between 1969 and 2000 the amount of starving population came down from 37 to 15 percent), food prices in some countries are 80 percent higher in 2009 than in 2007. As an average, food prices are 24 percent higher than in 2006. FAO also expects commodity prices to rise up from 10-30 percent in the following ten years, claiming that food is not a priority in global politics and this should change.

What is the percentage of responsibility for each of these nine factors that together have caused the problem? Here there is an avenue of further research topics by academics. But most important is to monitor these factors and to see how they are moving towards bringing the problem again.

3. The pathway to address food demand growth and the food inflation

In the third part of the paper, two ways are suggested to solve this coming food demand/inflation problem. One is going backwards towards an increase in protectionism, stimulating non-competitive areas to produce in an “economically artificial environment” and returning to the policies of “self sufficiency” of war times; the other is moving forward toward growth, global trade and inclusion. Offered to governments and international organizations is a contribution to the upcoming food demand and inflation problem, a ten-point agenda that could be the right avenue to follow, in providing long-term results, peace, income distribution, and inclusion. They will be addressed in sequence:

- (1) *To promote expansion in production horizontally into new areas, with environmental sustainability.* This expansion can be done in several countries (South America uses only 25 percent of its capacity), on all continents, in millions of hectares that today are poorly used. In Brazil, several studies by recognized institutions confirm the existence of more than 100 million hectares that can be utilized for food and biofuels production, without touching fragile systems and mostly growing over degraded pastures. These production and land expansions, if stimulated with sustainable contracts, will bring inclusion in farming, new entrepreneurs, job creation in less-developed nations, income distribution, and economic development, having even a positive impact in democracy. Land costs are getting higher since several pension funds are looking for security and buying land. Recently, a fund of US\$800 million in Arabian countries was dedicated to land buying and food security, having South American and African countries as targets (*Financial Times*, 2009a, b). There are several movements in China and other countries towards building supply chains abroad. This is a perfect match between investments and need for development.
- (2) *Productivity or vertical expansions (more production in areas that are already being utilized).* Several hectares in South America, in Africa, in Asia, and even in developed nations could produce more if more technology and investments were forthcoming. For comparison, the amount of corn a US farm can generate in tons per acre is two, or even three, times higher than the average production of Brazil and other countries. With irrigation, some farms in the tropics can generate three crops per year. Major research and investments should be dedicated to these improvements.
- (3) *Reduce food import taxes and other import barriers and protections.* Food prices in some countries are artificially inflated due to import taxes and other kinds of protection that damage international trade, markets and growth. As an example, beef in the European Union costs four or five times more than the same quality beef in an Argentinean or Brazilian store of the same European retailer. The argument mostly used is that lowering the protections will damage the local agriculture of less-developed countries. It must be assumed now that the new level of commodity prices may allow local agriculture to be competitive. Several other internal taxes on food could also be reduced by local governments, reducing consumer prices. Additionally, the more than US\$330 billion spent annually by OCDE members in agricultural subsidies puts more pressure on prices while undermining more cost-efficient food production in naturally competitive countries. The 2009 crisis may pull out money and funds from subsidies in

developed nations, since these are not the most important groups to be covered by national governments funds in times of crisis.

- (4) *Investment in international logistics in order to reduce food costs.* Parts of grain producing countries have extremely poor logistics. Governments should invest and society should work harder to change institutions in order to facilitate public-private partnerships to privatize ports, roads, and other food distribution and logistic equipments to make the flows faster and less energy consuming. A lot of loss happens here.
- (5) *Reduce transaction cost.* Major international food chains are badly coordinated, have several redundancies, make poor use of assets, can be corrupt, opportunistic and display other inefficiencies that are largely responsible for losses, increase in costs, and maintenance of not adding value companies, agents or others – all impacting on food prices. Institutional reforms as proposed by Douglass North are the solution here. Also, more efficient cooperatives, producer pools, and other collective actions should gain force to reduce redundancies and increase producer organization and bargaining power.
- (6) *Use the best sources for biofuels, in a totally sustainable way.* The example of Brazil could be better analyzed, since ethanol has been produced for more than 35 years, in 3.5 million hectares of cane, using only 1 percent of the country's arable land and supplying 52 percent of fuel transport consumption, with no impact on food production. The growth of food production and biofuels together at the State of Sao Paulo (the major area of sugar cane growth) in the last ten years shows that it is possible to combine. Crops for biofuels that have better yields and do not compete with food chains and should be prioritized in global development of biofuels. The energy balance of sugar cane ethanol is 4.5 times better than that of ethanol produced from sugar beet or wheat, and almost seven times better than ethanol produced from corn (Neves *et al.*, 2009).
- (7) *Invest in a new generation of fertilizers.* It is important to produce fertilizers from alternative sources, plants that can absorb more the energy of the sun, more recycling of by-products as sources of fertilizers to mitigate the huge risk and cost of fertilizers in the future. Fertilizers are among the most important and expensive inputs for agriculture, and in times in which yield must be improved, their importance increases. In the last three years, farmers have been facing an astonishing increase in the prices of fertilizers.
- (8) *Work more towards sustainable supply contracts for farmers, with integrated sustainable investments and projects.* It is of fundamental importance that margins and income will be better distributed on food chains, reaching farmers all over the world. Price stimulus is the best economic incentive for growth in production with technology. It is well known and studied how concentration in several food industries and retailing retains margins that could be better distributed to farmers, increasing economic development and bringing a very positive externality to several regions. Models of integrated projects with sustainable development could be used (Neves and Castro, 2009).
- (9) *Stimulate research and investments in innovation from all possible sources, but mostly in genetics, in order to find new solutions for food and biofuels production and consumption.* In trying to solve the sustainability equation, seeds are

a problem today, due to shortages. Public investments in agricultural research and development have decreased considerably in the past couple of decades, resulting in a yield-growth slowdown, disabling production and the ability to keep up with rising consumption. Since trust in biotechnology is increasing in society, bringing a new era of acceptance, research should receive more attention.

- (10) *Slowly work to change consumption habits in both food and fuel.* We must realize that there are not resources on the planet to allow nine billion people to live according to the common standards of developed nations. Behavior should gradually be changed towards sustainability. Food is over-consumed in several parts of the world, bringing with it obesity – a major health concern. Another area of inefficient consumption is fuel. Investments need to be made in resourceful public transportation. This is a major challenge in many countries. Barcelona has implemented a very attractive public biking system which is an excellent example of a working solution. Table I summarizes the discussion, bringing together all the causes and the proposed solutions.

After these three major parts that deal with the external environment, the last part of this paper is to talk about the possibilities of China and Brazil in the future, what maybe called the “China Brazil food bridge.”

4. The role of China and Brazil: “the food bridge”

This last part will start with the information that the flows of trade among China and Latin American countries went from US\$10 billion in 2000 to US\$140 billion in 2008. China and Brazil have strong complementarities and a long history of peace and acceptance. The Chinese community living in Brazil is enormous, well integrated with Brazil’s multiracial and multicultural society. Chinese are recognized as hard workers, setting up business and development in the last 50 years.

China is the largest developing nation, with the highest improvement of living standards in the world. In this very positive scenario of development, China will face problems in securing food supply for its own growing, richer, urban society.

Nine causes of food prices increase	Ten proposed solutions
Biofuels	Sustainable horizontal expansion towards new areas
Population growth	Vertical expansion with more technology (high tech)
Income distribution and wealth in populated countries	Reduction in food taxes and other protections
Governmental programs for food distribution	Investments in international logistics platform
Urbanization of population and megacities	Use the best sources for biofuels production
Oil prices impact on production and transportation costs	Reduction in transaction costs in food chains
Production shortages due to adverse climate and financial conditions, water, and climate change impacts	New generation fertilizers
Dollar devaluation	Sustainable supply contracts to farmers
Investment funds operating in commodities	Innovations (genetics and others)
	Consumption behavior for less energy consumption

Table I.
The food demand model

Source: Professor Marcos Fava Neves

These problems could be related to costs, to clean water, water availability, to soil conditions, to land, to environment and other factors. Brazil, on the other hand, has 850 million hectares of area, of which 350 million hectares are arable land; and of these, only 70 million are being used for crops; 200 million are used for pastures; and another 80 million are new land to be conquered. In resume, 100 million hectares that could be converted to agriculture, in a sustainable way.

In the coming years, Brazil has an opportunity to be the most important partner to supply food and biofuels to China, in a food security aspect. Just as an example, soybeans exports from Brazil to China grew 27 percent from 2008 to 2009. Brazilian participation in total China's imports increased from 0.7 percent in 2003 to almost 3 percent in 2009, and it is expected to grow faster due to imports of poultry, beef and other protein sources and food, that are just starting. The risks to food production in Brazil are very low, almost zero, since the country is a large food producer and exporter, with plenty of land and food in the internal market, and with reduced risks from political or institutional changes, such as forbidding exports, or expropriation of assets, as have been seen in several other countries. It is an open market for Chinese companies to produce food in Brazil to export to China, in a safe way.

Another great opportunity is to have common investments, in order for Brazil to help China in environmental concerns. Brazil has one of the cleanest energy matrixes in the world. According to Aston (2009), China has problems with water, and from its 600 million urban inhabitants, less than 5 percent have access to air with European safety standards. Again it is important to see the ethanol program, which is a positive example. In total, 90 percent of all Brazilian new cars are flex fuel, and of the fuel consumed in the country, ethanol has 52 percent against 48 percent of gasoline. By 2015, 80 percent of the internal market of fuels will be ethanol, produced in a sustainable way, from sugar cane. The area used to supply 52 percent of the fuel, today, corresponds to only 1 percent of the arable land. So there are opportunities here to produce ethanol to add in Chinese gasoline (E5-E15 percent), contributing to a strong reduction of pollution in China (65 percent of total pollutants in the country comes from auto emissions). China is also a producer of several products needed for Brazilian development, since China has technology, scale and expertise.

Since Brazil lacks resources for investment, this is where China may come in and participate. Logistics in Brazil are still a huge concern, mostly in grain production areas, increasing the cost of commodities and food. There are opportunities in roads, ports, airports, storage capacity, pipelines for ethanol, and several other investments. Another challenge, where Brazil is moving very fast, is to adapt food production towards international standards of sustainability.

China and Brazil have a role in the future, and this is very clear. China will be the world leader and most important economy in a few years. China has a history with Brazil, of common respect, of admiration. It is a perfect match. The countries should immediately work on topics related to one major question "how to enhance future food trade with a win-win relationship?" The cooperation must come linking institutions towards a better future, doing research together, linking the business communities in order to start and improve business, common investments, linking universities in interchange programs and others. Put people together towards the development of a new world, with economic, environmental, human sustainability and with tolerance towards the difference. Table II summarizes the food bridge concept.

Brazil	China
<p>Lacks investment capacity and logistics Can rapidly expand food production Has several possibilities for international investments Has low population/land available ratio, and around 100 million hectares available for development It is the world's largest exporter of beef, poultry, soybeans, juices, sugar, biofuels, coffee and in five to ten years will be the major food exporter of the most important food chains Enough supply of water for agriculture Is a net producer and exporter of the most efficient biofuel, the sugar cane-based ethanol, being used as E100 and E25 (100 percent ethanol cars and 25 percent ethanol in gasoline) Has one of the most mixed populations in the world and a long-term acceptance of Chinese community living in Brazil Federal Government has given large importance to the relations with China</p>	<p>Has the largest capacity for international investments and logistics Faces a incredible growth of income and urbanization and will need more food Has large amount of investors to invest and take advantage of opportunities in Brazil Low level of new land available for food production and is thinking in investing abroad to guarantee food security Scarcity of water for agriculture in some areas, and environmental pressures In five to ten years will need quantities of food from abroad and most of this food will come from Brazil Will need to expand biofuels production and usage towards a cleaner environment, adding biofuels to gasoline (E5 or E10 percent) and other. This biofuels can be produced by Chinese investments in Brazil and Africa Has a large Chinese community living in Brazil for several years Very good relationship in federal level with Brazil</p>

Table II.
The food bridge concept

Source: Professor Marcos Fava Neves

5. Conclusion

This paper discussed the economic and financial crisis, which will become part of history books sooner than expected, and raised a concern regarding food and biofuels demand and inflation. Several factors are changing, some of them dramatically, and were resumed in nine factors that should be followed and studied. In total, ten suggestions for actions were given and proposed, that are not new, and some are already being implemented with beautiful results. But a turning point was reached, etc. Society can either go backwards trying to increase protectionism, less efficient ventures of self-sufficiency, ban biofuels, create food export taxes, or even threaten to turn private companies into public companies. Or, society can move forward, and there is a hope that global interests will allow moving forward with this positive agenda, the right avenue for global sustainability. In this environment, China and Brazil have a major role, and will have, in the following years, the most important food bridge in the world.

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