

Brazilian Agriculture and the Crisis

GUILHERME DIAS (INTERVIEW)

BRAZILIAN agriculture was deeply affected by the international crisis. In an interview with ESTUDOS AVANÇADOS, professor Guilherme Dias, renowned specialist in agriculture problems in the country, made a critical assessment of the principal problems in this sector, putting forth that “the crisis will determine significant technological changes,” which will not be easy owing to divergences in the rural environments. Dias drew attention to the errors from the destruction of international food reserves as a consequence of the World Trade Organization’s own policies (WTO). He indicated the need to modify Brazil’s commerce with China and emphasized that Brazil is in front of modifications in the production of automobiles and fuels. He defended the production of ethanol assuming respect for the social and environmental impact, and presented a new vision with respect to the expansion of the agricultural frontier in Amazonia, with relocation of 25 million Brazilians to the area.

In the following we present a summary of the opinions of this tenured professor of Economics, Administration and Accounting (FEA) of USP, expressed in an interview given to journalist Marco Antônio Tavares Coelho, executive editor of *ESTUDOS AVANÇADOS* journal.

ESTUDOS AVANÇADOS – One of the causes of this international crisis was the financializing of the economy. How did this activity affect agriculture and what was its impact?

Guilherme Dias – This financial activity affected agriculture profoundly. But Brazil was almost on its margin. However, as industrial structures use this procedure to obtain major financial resources, they suffered a fatal blow. This is because they were within lines based on the ease of engaging in this speculation, provoking the sea of debt for the investors.

For twenty or thirty years, the entire world thought that that situation was quite good because the abundance of credit was fantastic. Now we are going to test international development agreements and we are going to go through ten years evaluating how to make this financial system work. Moreover, since credit will be less abundant, it will demonstrate how vulnerable our agriculture is to the restriction of credit.

Until now we have gone through a cycle of expansion of agriculture in which the bottleneck has always been credit expansion connected to the

planting for future harvest. This system was implemented because the normal generation of bank credit couldn't take account for agricultural demand. When the government withdrew from the role of creating currency (in resorting to inflation), there was no support from the financial system to supply the needs of agriculture and cattle raising. In the last ten years, this lack was supplied by credit furnished by *traders* and by fertilizer and defense multinationals.

But they took a blow from the international crisis. Thus the abundance of credit for agriculture was cut. Therefore, now, the question is to find out who is going to fulfill this role. It will have to be performed by the government, at least as an intervener in this process. However, I am not seeing interest in this question by the government. I don't know, therefore, where this risk capital for agriculture will come from.

ESTUDOS AVANÇADOS – How does credit reach the producers?

Guilherme Dias – *To a great extent*, a third part of this credit was financed by the banking system, an equal part by the producers own capital, and the remaining portion provided by private credit, which fifteen years ago was almost nothing. In this last period, this private capital played an important strategic role. If it disappears now, it will have to be supplied by another form of credit, such as the cooperatives, or from another structure of this kind. For this, however, some incentive is indispensable. In other words, government intervention.

If this doesn't happen, the agriculture sector will fall into a crisis of indebtedness such as occurred in 1995. Twelve years later, we are living in a similar situation, which threatens to paralyze agriculture. Because of this, renegotiation of producer's debts is essential. But this renegotiation needs to be of a structuring type. In other words, the government will need to regulate and say to whom it will give guarantees and to whom it will not give guarantees and how it will function in the entire scheme.

In Brazil there is no solid structure that can withstand a crisis in the world financial system. Since it is reaching Brazil, how will it function from now on the world banking system? What will be the rules for financial prudence that will be implemented? When this regulatory apparatus arrives here, will there be difficulties in the expansion of credit? Will the multinationals return looking for cheap credit abroad in order to make loans in Brazil?

The abundance of credit abroad facilitated the strategy of the traders and multinationals among us, and then the situation was out of control. But this has ended and they are making requirements for renewing the financing. In February and March 2008, there were already clear signs of how the international financial system was beginning to apply the brakes in terms of guarantee for sustaining the elevated levels of financial investment. Such a process preceded the investment crisis in September of last year. In truth, the four largest investors were already changing their attitude and disposition to

assume risks in Brazil. The problem is that many producers are in debt and late. Thus, how can this problem be resolved?

ESTUDOS AVANÇADOS – What was the impact of the crisis on agricultural business?

Guilherme Dias – The initial impact was deceleration of demand, as in the entirety of the international economy. Since agribusiness is highly dedicated to the exportation of primary products, it suffers directly, due to the supply chain in multiple countries. When the agribusiness was hit by the shock of demand, in the first place consumption and redistribution of its stocks was stimulated. However, the shock hit strongly resulting in a decline in the price of agricultural commodities.

But the agribusiness loss goes beyond this. The question is whether international trade will return to its previous prime position, growing two or three times more than the world economy. The consumer countries in the next two or three years will attempt to improve their domestic economy. They are going to try to understand what happened and attempt to obtain new agreements. This handling will show that the previous growth was unsustainable and that there was a series of combinations, underlying the process, underlying the relations between countries that allowed the prices of commodities to rise in abusively. However, interdependence can no longer be forced between productive systems as was the case in the 1990s. All of this will affect agribusiness perspectives.

The position of leading countries was shaken, as much a consequence of the Chinese position as in the resistance of India to the *Doha Round*, defending a major safeguard for producer countries. These two huge countries, from the point of view of their populations, don't accept and will no longer accept very strong food dependency. We were counting on this in recent years, betting that super-populous countries were going to counter dependency on food trade.

But various countries were not cautious in these recent years in supporting globalization. Now they'll be more careful, since we have to work in a different reality in food trade. In other words, we need to make new equations for the exporting of our surpluses. In addition, we will examine whether we will have new preferential partners in this process, if we will increase the degree of our dependency in relation to China. And if we will reopen collaboration channels with India, which we interrupted.

Countries won't forget the lack of sustainability from that situation, with respect to price volatility, primarily between 2006 and 2008. We aren't going to cry about it since the prices were rising and it was easy to take advantage in that period. But those on the other side of the counter had a shock from the dependence and volatility of prices. Our situation was good, we were discovering the *pre-salt* and we had good perspectives ahead. Nevertheless, the perspective is different now.

Equating Different Products

ESTUDOS AVANÇADOS – Professor, what are the problems in production and in exportation of agricultural products?

Guilherme Dias – The Chinese are major purchasers of soy. But, if we want a better mesh with China, we ought to tell them that the road is not only for an agreement with the WTO, where they cause problems in the meat market, while facilitating transactions with raw-materials. It isn't possible to limit our transactions with China to raw materials, even because this exportation is subject to frequent price volatility. This isn't a positive path for Brazil. We intend a major agreement with China, and not only to export raw products.

The market picture for meat is dynamic. We took advantage of the disarray in this sector between 2000 and 2008 in the face of a succession of fevers. The swine fever entered Europe, suddenly, exploded to FMD in the swine culture to within 60 kilometers of London, spreading quickly to Northern France, Belgian and Holland, frightening their health departments. This inspection is efficient and smothered the epidemic, but didn't smother the scare, because they understood that European security failed in a vital area, in spite of its having dedicated immense resources to its defense for the last twenty years.

They brought a turn in that beef market and in less than two years the "mad cow" disease reappeared in the stock. When everyone supposed that it had ended, the English violated the rules agreement for control of this disease and sold bones, the remains of brains and the marrow of infected animals, to have them used in rations. The result was the reappearance of the disease in Canada and the United States, striking a hard blow in the system that generates excesses of meat. Although the disease has been researched for thirty years, but its causes had still not been discovered, and the risk of an epidemic would be terrible, because dead or alive the animal is able to pass the disease on the human beings.

The North American meat system continues generating surpluses but when its offerings diminished we took advantage of the opportunity to place our products. We export to countries that have a protection system but with lesser demands, like the Middle East. We expanded through there and began to enter Europe. We can, therefore, play a significant role in the world meat supply.

Efficient production of chicken is easily organized in various countries as long as they have supplies to ensure rations of soy, wheat and corn. The same isn't true for the reproduction of cattle. Livestock system is more selective and raising cattle requires higher investments. Africa has good pasture in savannas and fields, but doesn't have a production system appropriate to livestock.

We have the largest herds of cattle in the world and have a refrigeration network.

But they are going through a management crisis and will have to be restructured. This sector, however, faces environmental questions and will have to remake its growth model, which is based on occupying new areas. From

that point remains the conflict between the ministries of Agriculture and the Environment. The fact is that we have technology to grow livestock in a different manner, supported in studies of EMBRAPA, or along the lines of tropical livestock, adapted to our structure.

The technology developed more than 20 years ago clearly shows that the levels of farming productivity and intensive cattle raising can evolve together. In other words, one doesn't need to replace the other. There is a very important long term system using area rotation. The producer uses areas for livestock for around four years; afterwards, fields are planted for six, seven, or eight years. Thus a synergy is established that benefits the balance of soil, of nutrients and of organic material, all in the same system, including the health/ sanitation point of view.

Another important project for technological change is the minimum direct cultivation in agriculture. Those interested in the theme are looking more deeply at that question and believe in this path. However, these technological challenges are not accepted by everyone and many don't accept this type of activity. Because of this, it is difficult to adopt a policy decision, since the traditional producers will resist such changes. Thus, in a certain sense we are coasting, since the technology has existed for more than five years. This transition will be traumatic, but this is an element in the dynamic of preventing the expansion of the agricultural frontier in Amazonia. In the rural world there is already a current committed to this pressure. Many ranchers understand the challenges. However, they are not all prepared to effect these changes and a much longer crisis could destabilize the present structure of production.

Technological Changes

ESTUDOS AVANÇADOS – Considering the depth of the crisis, what is the possibility of implementing technological changes?

Guilherme Dias – The crises are an opportunity to take projects off the shelves and make bets on new technologies in the agricultural sector. There is much criticism of the dominant conventional model over the last thirty or forty years, as a consequence of environmental questions, from the problem of climate changes and from the need for a more sustainable growth from an ecological point of view.

This criticism is aggressively launched and some even in a picturesque and disoriented way (such as the heat over trans-genetic research). But I think that there is also a serious and consolidated criticism. For example, there is a basis for criticizing the risks of chemical technology, besides the questions related to the movement of soils, as a result of the use of machines and other things of this kind.

But Brazilian agriculture and livestock is evolving. In spite of these criticisms there are already positive indications. First, there is the rapidity in the way direct planting is being adopted, which is a major victory. Beside that, we have good experiments with organic agriculture in Brazil, or, as it is known

presently, biodynamics. Other initiatives are being adopted to increase soil fertility, as well as genetic improvement of plants, toward greater productivity and less aggressiveness to the environment.

In addition to this, we have the will to implement turnover of livestock and agriculture, which requires technological transformations. All this is related to the search for a sustainable road in terms of development, but without our expanding the agricultural frontier. This question is basic because our agricultural growth model until now has depended on expanding the frontier.

Hence the importance of consolidating the changes to the technological paradigm. Technological innovations are at our disposal. They aren't ready to win a Nobel Prize, but the advances that we've made in that direction are strong and need to be publicized. However, this technological modernization depends on capital and our changing the mental set of agricultural businessmen.

ESTUDOS AVANÇADOS – What is your analysis of the agricultural frontier expansion in the North of Brazil?

Guilherme Dias – The bet being made in the valuation of the lands and in the idea of expansion of the agricultural frontier still consumes the energy of powerful economic groups. They are still betting on the new frontier and have invested in these businesses. So, it needs to be asserted: “We won't support this road anymore.”

The government has to intervene in this question. I've heard ideas arise in the governmental environment and am convinced that there is no comprehension of the absolute necessity of ending investments in the traditional system in the bet on the agricultural frontier. There are the occurrences in Para and the conflicts in other places that haven't reached public awareness. The worst is that those not known about are those that are receiving investments. This question is rooted in the Brazilian agricultural world, which is quite complex.

The political movement that accounts for it, with the 1988 Constitution, with the transformation of all that territory, with the relocation there of 25 million Brazilians, caused an extraordinary complication to the political equation. There are 25 million Brazilians betting on the development of that region, but within the model that they know from the past. And they are there! There are 25 million in another political scenario, who have the same parliamentary representation as the other States in the Federation. With that idea that National Security needed a crowd of people in that immense territory, a population was relocated to the North Region with the expectation of development in terms of old models. And that large portion of Brazilians is waiting for the agricultural frontier to reach there.

The Global Food Crisis

ESTUDOS AVANÇADOS – How do you analyze the food crisis in the world? What can Brazil do about this question?

Guilherme Dias – The accelerated growth that has taken place in the world at the beginning of the years of this century is unsustainable, as the present crisis demonstrated. It won't be possible to grow in the same manner. The overpopulated countries of the world, like China and India, are rightly frightened by the price volatility of food since 2006. This situation also applies to Pakistan and to the other populous countries of Southeast Asia – Indonesia, Thailand, the Philippines, Malaysia, etc. These countries, including China, need to feed their population, and to do this their agriculture has to grow. The world's alliances are recomposing around this process. Brazil isn't excluded from this, because we can and have to be food exporters. But we have to treat this process in a different manner.

There is, however, a basic aspect in the question of foods in the world that isn't being analyzed by the press. It deals with what occurred in the Uruguay Round, in deciding on liberalization of agricultural products internationally. The incentives for developing reserves disappeared. As a result, none of the large countries that generate excess agricultural reserves found justification in maintaining elevated food reserves. They passed this burden on to the consumer countries.

Within the logic of the agreement established by the entrance of China in the WTO, they need to adjust their domestic policy in the face of this equation of the world supply. Because of this it has been reducing its reserves since 1992. Looking at the statistics, it can be seen that they reduced their food reserves by half. Thus it has come to the consumer countries and those dependent on importing foods for the responsibility of accumulating stocks, Neither China nor India accept the burden of maintaining these reserves, considering the price volatility of foods and the financial burden of doing this.

During the Cold War, the United States maintained immense stocks because they were afraid of an armed conflict. This worked well for the North Americans and the Soviets had to beg the United States to supply them with wheat. Thus, these reserves were always used by the North Americans as an instrument of political pressure. Today North Americans no longer feel the need to maintain these reserves.

Under current globalized rules, an organization as the WTO punishes Brazil if we raise the prices of rice, corn, soy etc. above the current prices in the international market with the aim of creating stocks. But Brazil lacks sufficient resources to handle these costs. Only raising the prices of these products is what could enable us to shoulder these costs. But other countries would certainly protest against this policy.

The United States has a good production of corn and resolved to use it to produce ethanol. They aren't concerned with the scarcity of corn in the world. There is also the case of Argentina with wheat production. Our neighbors aren't interested in maintaining stocks of wheat and are even suspending export of it. They're determined not to carry the world on its back.

There is no world organization that makes decisions regarding stocks of food, the FAO (Food and Agriculture Organization) lacks the instruments. The WTO has to rethink this question, because there are no world rules related to the trade of products vital to the survival of human society. However, this question can't be resolved on the basis of market prices because they can be devastating to the populations of the poor countries by starvation.

Is it essential to not stimulate specific programs, such as ethanol production, in light of the food crisis? The response to this crisis has to be the creation of incentives for the countries that are able to produce excesses of foods to take responsibility for maintaining reserves. For this it is urgent to establish international cooperation around this question. In being so, whenever this world stock falls below a certain level in relation to consumption, there has to be a safeguard, a rule for reconstituting the stocks, ending the scares in the face of the question. In that case the competition between biofuels and foods would become a lesser problem than that presented by the Germans in 2007.

The Question of Biofuels

ESTUDOS AVANÇADOS – What is your opinion with regard to the controversy between biofuels and foods production?

Guilherme Dias – My opinion about biofuels took a different route, at the end of 2007, with that report by the Germans putting in question the change in use of the soil as a consequence of the production of ethanol. That document influenced the world's opinion. It danced around the need to examine environmental and social problems, such as sustainability in the production of ethanol, as well as changes in the nature of soils and the costs of this modification. But the research showed that the data are not bad for this production, differently from what was published in the report of those German technicians. However, the document showed the need to have limitations on the production of ethanol, also demonstrating that it could be stimulated in certain countries, while in others it shouldn't be encouraged. In sum, in Brazil the production of ethanol, using sugar cane, deserves support.

Above everything it is essential to understand that the problem of vehicles and fuels can't be resolved through a single solution. This is because there might be a major transformation in automobiles with a combustion engine, which will determine changes in the demand for combustible liquids. This is a new scenario for the problem. It won't be a scenario from the past in which we find a substitute for petroleum. There are various indications that we will be able to follow a new technological paradigm regarding this subject. Therefore, it's deceptive to think that anything can be done as it was in the past.

The great technological turning point is the research done in the last ten years, which provides signs that this question can be resolved. We have to wait for a definition about combustibles. And everything will depend on the volume of investments applied to making these alternatives viable.

From the experiments in California, with the hybrids implemented there (cars using electricity and gasoline), we have a good perspective ahead. It deals with a car with a small combustion engine that generates electricity and power, charging a battery - a form of diesel-electric locomotion.

In this research there are nearly ten thousand vehicles functioning. There the manufacturers (including Toyota) receive tax incentives for introducing these models. It's now beginning to break the resistance of consumers to the use of this hybrid. The greater portion of these models uses gasoline, with very low consumption. But this model is still too expensive.

The centers of technological renewal are testing this electric car and the hybrid car. The fuel for these vehicles (electric cells) is showing a significant technological change, related to the crisis in energy and with the problem of the global warming of the planet. In this way, this innovation will modify the weight of the metal mechanical sector, giving the chemical industry a new role.

And if the problem were to replace the combustion engine with a hydrogen engine in combination with adoption of the electric cell? What fuel would it use? Then, the logic of the process would be completely altered. Therefore, it makes no sense to remain stuck on petroleum, trying to find a substitute for it, when a barrel of black oil costs more than a hundred dollars.

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