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AGRIBUSINESS OF THE FUTURE 2050 STARTS NOW

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THE CHANGE HAS BEGAN

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THE CHANGE HAS BEGAN

The great agribusiness specialists have no doubts: We are during a period of profound changes in the supply and demand of food. And the new course that is designed around the world will take effect faster than expected, in 2020 and not in 2050. But what are the paths that lead to this? "There are a number of cyclical factors in the world's economy that can accentuate or soften the change, depending on how they evolve. But in that case, it's structural and tends to act much stronger," says José Vicente Ferraz of Informa Economics IEG I FNP. Given this and considering that food and agricultural commodities are basic products, let's turn to the analysis of demand and supply.

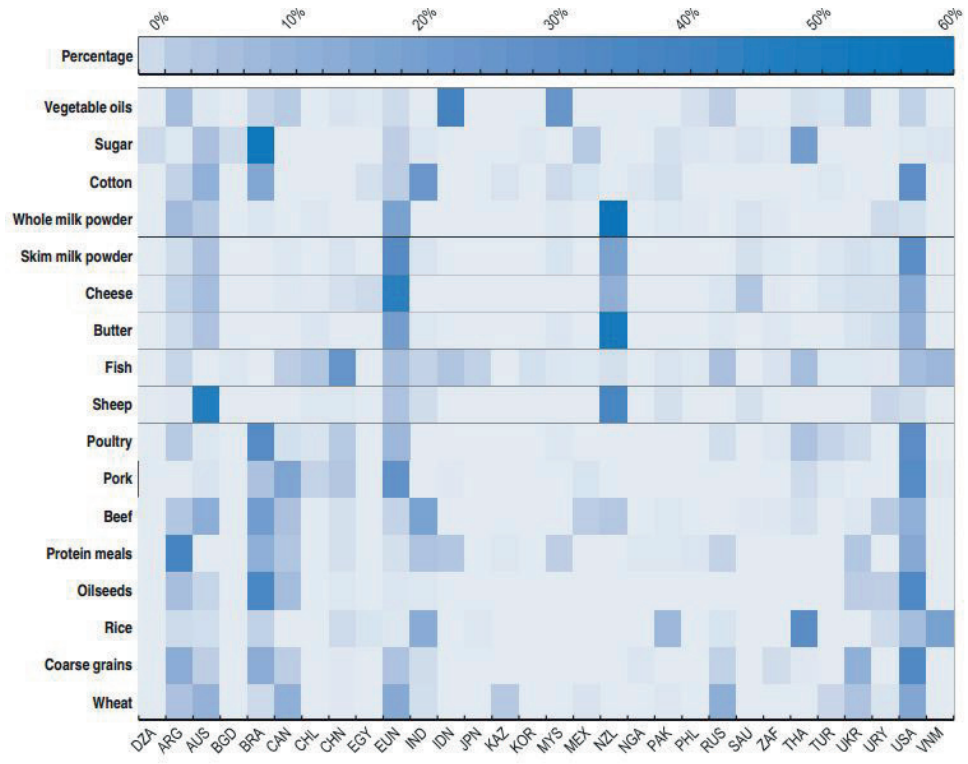
BY THE SIDE OF THE DEMAND

The main changes in demand are found in developing countries, where continuous population growth, increasing per capita income and increasing urbanization should boost the search for food. The increase in income should diversify the diet, which would lead to an increased consumption of animal protein in relation to other foods.

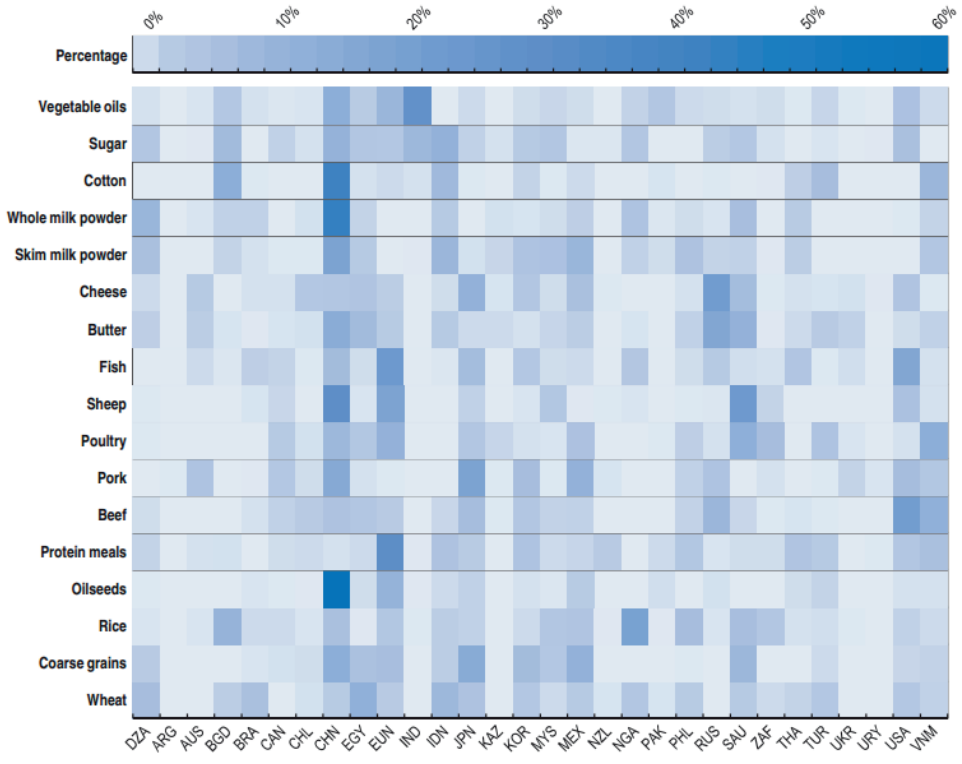
This trend represented by China, the world's largest importer of food that brings billions of consumers to the market every year, can be imagined as a powerful machinery where all gears are interconnected to move the new world agribusiness landscape. The first piece is the Chinese population, which began to consume large quantities of meat and chicken bought abroad. Parallel to the increase in meat consumption is our second piece: The great search for soybeans and corn to produce food to support these animals. Finally, it's relevant to consider the Chinese pig herd, the largest in the world, which also depends on grain.

Urbanization also influences these changes, since it has increased exponentially, according to Ferraz, and permeates both the demand and the supply of food. "In this factor, labor is lost in the countryside that passes into the city and, as people go through this exodus, the pattern of consumption also changes." In other words, those who live in the countryside with very low incomes practice subsistence with, for example, their own eggs, chickens and vegetables in their backyard. However, in cities, it depends on the purchase of food, which impacts the production of industrialized products and the distribution system.

BASIC PRODUCT EXPORT CONCENTRATION IN 2024



BASIC PRODUCT IMPORT CONCENTRATION IN 2024



Source: OECD/FAO (2015), OECD/FAO (2015), OECD-FAO Agricultural Outlook, OECD Agriculture Statistics

Note: Dark marks indicate a high percentage of export/import for a specific product. Only countries that have significant relevance in export/import for at least one product are represented. Countries (CAN) Canada, (USA) United States, (EUN) European Union, (AUS) Australia, (NZL) New Zealand, (JPN) Japan, (ZAF) South Africa, (KAZ) Kazakhstan, (RUS) Russia, (UKR) Ukraine, (DZA) Algeria, (BRA) Brazil, (CHL) Chile, (MEX) Mexico, (URY) Uruguay, (BGD) Bangladesh, (CHN) China, (IND) India, (IDN) Indonesia, (KOR) Korea, (MYS) Malaysia, (PAK) Pakistan, (PHL) Philippines, (THA) Thailand, (VNM) Vietnam, (SAU) Saudi Arabia and (TUR) Turkey.

THE CHANGE HAS BEGAN

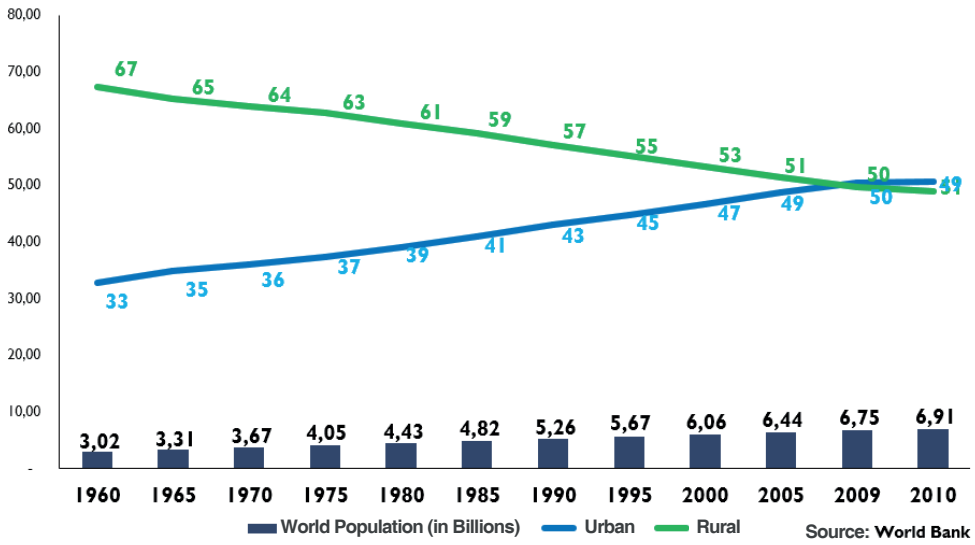
ON THE SUPPLY SIDE

According to the OECD-FAO Agricultural Outlook 2015-2024 report, Brazil is the second largest global supplier of agricultural products and has everything to be the main supplier in this area and meet the global demand for food, which will come mainly from Asia. It's estimated that external sales of poultry in Brazil will evolve to approximately 2.8% per year and, therefore, will tend to grow by more than 31% in a decade. This ensures that the country will continue to represent almost a third of the world's product trade. In this scenario, they suffer impact on labor, sustainability and the law of decreasing increases.

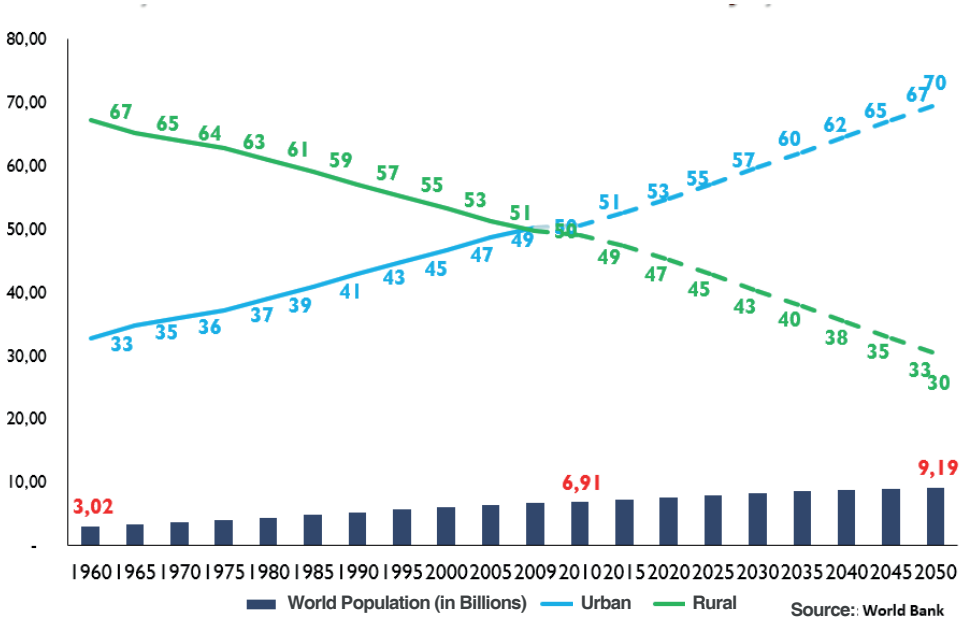
Also addressed, in the previous topic, is the strong disposition to leave the rural environment, which affects the supply and, consequently, the way of producing food. The demographic dynamics of urban and rural populations began to change since 1960 and began to revert since 2010 worldwide. This trend, according to the World Bank projection, should be accentuated in the next 30 years. Between 2010 and 2050, the world population is expected to grow 33%, from 6.9 billion to 9.1 billion. For every 70 inhabitants of the city, there will only be 30 food producers in rural areas in the 2050s.

Brazil is the second largest global supplier of agricultural products and has everything to be an important player in satisfying the additional global demand for food, which will come essentially from Asia.

WORLD RURAL X URBAN POPULATION (%)



WORLD RURAL X URBAN POPULATION (%) PROJECTION BY 2050



In Brazil, the road is the same. And without return, notes the study "The rural world in the 21st century in Brazil", organized by Embrapa and Unicamp. While the urban population grew 2.5% annually in the 1990s and 1.6% in the 2000s, the rural population decreased from 35.7 million people in 1991 to 29.6 million in 2010, indicating a 1% drop by year. The reduction was faster in the 1990s: 3.9 million people no longer live in rural households. In the first part of the 2000s, this population decreased by 2.2 million, which corresponds to 7% of the population of 2000. This reality will be accentuated, according to the technical director of Informa Economics IEG | FNP, José Vicente Ferraz. "We will become like the United States, which has about 12% of its population in the countryside."

BRAZILIAN POPULATION ACCORDING TO HOME LOCATION

Year	Urban area			Rural area		
	People (thousands)	%	Households (thousands)	People (thousands)	%	Households (thousands)
1991	110.423	75,6	27.248	35.714	24,4	7.633
2000	137.434	81,2	37.516	31.848	18,8	7.508
2010	160.438	84,4	49.296	29.655	15,6	8.131

Source: The rural world in the 21st century Brazil - Embrapa / Unicamp (State University of Campinas). Note: Own elaboration based on the Demographic Census of 1991, 2000 and 2010. Exclusive residents in collective homes.

Another factor regarding food supply is sustainability. This is because there is a difficulty imposed by the environmental problem itself to open new production areas with horizontal growth, a very common practice in Brazil in recent decades. The following happened: The owner increased production by buying new areas, which was possible due to the low price of land. Wood removed from the new space was still sold and allowed the buyer to buy another farms. With the government credit and the stimulus for national integration and land occupation, the farmer could even sell a farm and buy a larger one. “But from the second half of the 1990s, very strong growth restrictions began to appear in brazil. Then, the expansion went on to gain productivity,” says Ferraz.

On the other hand, restrictions on the opening of new areas collide with the stock of usable land in the world, which limits its production factor. “The growth of supply is zero, but demand is growing. Soon the price of land will increase,” says Informa Economics IEG I PNF. According to him, for the producer to be economically viable it’s necessary to have a higher remuneration to compensate for the capital invested and linked to the land. A big knot, isn't it? Because it is only unleashed producing more within the same area. With this, the technology applied to the field became the agenda for the survival of the agricultural producer. "If the producer fails to increase the income per unit area in a process of increasing land costs, will end up in bankrupt," he says. Finally, we must not miss the law of diminishing additions and the technological revolution, which we will exemplify with a corn crop. Imagine that in the 1970s the production of a cornfield was 1,800 kg/ha. To reach 3,500 kg/ha in the 1990s, the producer used some productive techniques.

Its increase to 6,000 kg/ha in 2015 allows it to reach a productivity considered reasonable. The level of 12,000 kg/ha will probably be reached in 2050 because the challenge of each gain is much greater. “The curve, therefore, tends to be asymptotic, that is, it has an initial explosion and after reaching a certain level it’s necessary to add much more technology. Therefore, there is a need for a great technological revolution,” says Ferraz. From now on, in order to maintain productivity performance, it’s necessary to incorporate robots, biotechnology and nanotechnology in agribusiness.

If the producer fails to increase the income per unit area in a process of increasing land costs, will end up in bankrupt

DIRECTIONS OF CHANGE

FOTO: SHUTTERSTOCK

DIRECTIONS OF CHANGE

The new rural environment essentially includes technologies that satisfy the need to produce more with less. First, however, it's important not to fall into the error of summarizing the productivity of agribusiness only by increasing production in the same area, since this is directed to the land factor. When an employee produces more by investing in a computer, machine or capital, we take care of the productivity of the capital factor. We must also respond to labor shortages in the field, which determines another factor in productivity gains. "The land is the most obvious, however, we need to increase productivity in all aspects." As this siege begins to tighten, it's urgent to make a technological revolution in the field with more automation and robotics.

Correctly, it's necessary to leave on the radar the management and training of human resources to use electronic devices. After all, it makes no sense to have a satellite-guided production if nobody knows how to use it and take advantage of it. Not to mention the management of the so-called advanced manufacturing, which allows machines to operate other machines.

All this interferes with the profile of the rural worker who leaves the property and goes to a nearby city. Much of the production will be operated remotely by people who live in the urban perimeter and will monitor the farm all the time on their mobile phones.

The roads opened by the increase of the income and the urbanization change the agribusinesses of the world. "At this point, the chicken is no longer plucked in a yard and is now produced at scale in an industry to be frozen and distributed. The production process changes completely and influences supply and demand, since it begins to have a system that eliminates certain types of consumption and implies food consumption and imports," says Ferraz.

Proof of this is FAO's comparison of urban and rural eating habits, which indicates that in rural communities, diets are less diversified, while city dwellers have a varied diet rich in animal proteins and fats. Cities have the characteristic of consuming more meat, poultry, milk and other dairy products. Impacted by the rural exodus, China, for example, had carbohydrates as a staple food until the end of the last century, but meat imports are expected to increase 3% annually by 1.7 million tons by 2022, a year before the population reaches 1.4 billion, according to a United Nations perspective.

"We need to increase productivity in all aspects."

CHALLENGES FOR ALL

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CHALLENGES FOR ALL

The bar will raise. The metaphor used by José Vicente Ferraz of Informa Economics IEG I The FNP sounds like a warning signal for small farmers, who are likely to face problems arising from the need for capital intensification to comply with the new agribusiness demands. “Don't think it's a matter of going to the bank and getting a loan. Agriculture is risky and harvest problems are always an issue. The tendency is for small producers to disappear,” he says.

There are at least two things that can be done to escape this forecast. One is to run away with some investment and take the position of medium producer and the other is to specialize for a niche. However, in this context, two reflections are worthwhile. First, those that produce for a niche aren’t small, because the capital invested, the income and the technology applied are medium or large. In addition, as the bar rises, new levels are created, and the medium is considered small.

Who is prepared to face these changes? “It's not about being prepared, but about wanting to participate in this game. There is a challenge and preparation is needed,” says Ferraz. In order not to be left behind, it’s better to seek the support of the government, the research companies (which will try to adapt the technology so that it is accessible) and the consultancies to plan the change effectively. At the same time, try to learn about the latest technologies at fairs, universities and research institutes.

"The tendency is for small producers to disappear"

ABOUT AGRISHOW

One of the largest agricultural fairs in the world, Agrishow brings together solutions for all types of crops and property sizes, and is recognized as the setting for launching the main agribusiness trends and innovations, which brings together more than 800 exhibiting brands and plus 150,000 qualified visitors in 520,000 m² of exhibition area, providing the latest in agricultural technology.

Organized by the main entities related to Brazilian agribusiness, such as ABAG - Brazilian Association of Agribusiness, ABIMAQ - Brazilian Association of Machinery and Equipment Industry, ANDA - National Association for Manure Diffusion, FAESP - Federation of Agriculture and Livestock of the State of São Paulo and SRB - Brazilian Rural Society, and organized by Informa Markets, Agrishow is the great meeting of the sector, acting in the development of agribusiness.

www.agrishow.com.br

ABOUT INFORMA ECONOMICS IEG | FNP

IEG FNP represents Agribusiness Intelligence in Brazil. He has worked for more than 25 years in agribusiness consulting in the country.

By offering news, historical, current and forecast data, and the prospective analysis required for organizations to make quick and informed business decisions in a volatile industry, Agribusiness Intelligence is the complete provider of global food and agriculture intelligence.

The consulting projects include analysis of technical and economic investments, sector analysis, capital valuations, new strategies for investors, technical due diligence, mergers and acquisitions, market studies, competitive intelligence studies and sector studies.

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