ANÁLISE DO CONSUMO BRASILEIRO DE HORTIFRUTÍCOLAS NO SETOR DE REFEIÇÕES FORA DO LAR

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APRESENTACAO ORAL-Estrutura, Evolução e Dinâmica dos Sistemas Agroalimentares e Cadeias Agroindustriais

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ANALYSIS OF FRUITS AND VEGETABLES CONSUMPTION IN BRAZILIAN OUT-OF-HOME FOOD SECTOR

Resumo
O número de pessoas que come fora de casa aumentou no Brasil, como em outras partes do mundo. Acompanhando a mudança de hábitos na população brasileira, a cadeia de fornecimento de frutas e vegetais tem se tornado cada vez mais complexa. A praticidade é uma característica importante no momento da escolha dos alimentos consumidos hoje. Assim, os segmentos que oferecem a conveniência nas refeições servidas têm crescido, como os restaurantes. Estima-se que, em 10 anos, os gastos com refeições fora de casa vão ser o dobro do valor estimado pela Pesquisa de Orçamento Familiar, do Instituto Brasileiro de Geografia e Estatística (IBGE) em 2002/2003. Com esta perspectiva, é importante conhecer o setor e promover uma maior integração entre a produção de hortícolas e os Serviços de Alimentação. Comparando-se o cardápio organizado por nutricionistas para restaurantes institucionais e o consumo doméstico levantado pela POF/IBGE (2002/03), o total ingerido de frutas e hortaliças em uma única refeição em restaurantes institucionais pode ser maior do que a quantidade consumida em casa durante um dia inteiro. A logística de distribuição, as processadoras de alimentos minimamente processados e a agroindústria são cada vez parceiros mais importantes do setor produtivo de frutas e hortaliças. A melhor capacitação no sentido de atender a demanda de Serviços de Alimentação, através de parcerias com o setor produtivo, é a base para a eficiência da cadeia. A melhor integração de Serviços de Alimentação com a cadeia de produção de hortícolas é um desafio e uma oportunidade para os setores produtivo e agroindustrial.

Palavras-chave: Serviços de Alimentação, Frutas e Hortalícias

Abstract
The number of people who eat out of home has increased in Brazil, as in other parts of the world. Accompanying the change of habits of the Brazilian population, the supply chain of fruits and vegetables is becoming more complex. The practicability is an important feature at the time of the choice of foods consumed today. Thus, segments that offer convenience in meals served are growing, such as the restaurants. It is estimated that in 10 years, spending on meals out of home will double in front of the value estimated by Search Family Budget, the Brazilian Institute of Geography and Statistics (IBGE) in 2002/2003. With this perspective, it is important to know this sector and promote a greater integration between horticultural production and Food Service. Comparing the menu organized by nutritionists for institutional restaurants and the consumption projected by POF/IBGE (2002/03), the consumption of fruits
and vegetables in a single meal may be higher than the amount consumed at home over a whole day. The distributor, the units of fresh cut products and agribusiness are increasingly important partners in the productive sector of fruits and vegetables. The best capacitating of them in perspective to meet the demand of Food Service through partnerships with the productive sector is the basis for the efficiency of this chain. Better integrate Food Service with the horticultural production chain is a challenge and an opportunity for agricultural and agribusiness sectors.

**Key-words: Food Service, Fruits, Vegetables**

1. **Introduction**

   In Brazil, the North American term Food Service can be translated as “Serviços de Alimentação”. That refers to meals made at the workplace, leisure, hotels, hospitals, among others, or meals consumed at home, but prepared in restaurants, companies of frozen products, etc. The Brazilian term “Serviços de Alimentação” involves from purchasing, distribution of food, supplies, equipment, packaging, storage and services, to the preparation and delivery of meals (PROENÇA, 1997).

   As in other parts of the world, the number of people who eat out of home has increased in Brazil. According to the Survey on Family Budget (Pesquisa de Orçamento Familiar – POF), conducted between 2002 and 2003 by the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística – IBGE), 24% of the total spent on food per family were spent on products consumed out of home. Three decades ago, it accounted for 7%. In the Southeast of Brazil, particularly, at the beginning of the current decade, 27% of the total amount spent on food was destined for out-of-home consumption (IBGE). In 2009, it is possible that this percentage has increased and still grows, which indicates the potential of this market in Brazil.

   There are several factors that stimulate out-of-home food consumption. The concentration of people in large urban centers, which makes difficult for people to go eat at home, and the increased number of women in the labor market are some of these factors. IBGE’s survey shows that between 1971 and 2007, women’s participation almost doubled in the Economically Active Population (População Economicamente Ativa - PEA), from 23% to 43% of the total.

   It is estimated that sales of fruits and vegetables in the traditional marketing channel (grower > wholesale > retail > home consumption) are still much higher than the sales for food service segments – the latter represents all forms of food ready for consumption, obtained in restaurants, bars, companies, hospitals and school meals, and others, including food consumed at home, but prepared externally.

   There are no specific statistics on these sales, but based on the market data for all kinds of *in natura* products, established by the Brazilian Association of Food Industries (Associação Brasileira das Indústrias de Alimentação – Abia), it is estimated that about 20% of these items represent purchases made by Food Service companies, and the other 80% go to traditional retail chain (supermarkets and free markets). The sector of out-of-home food consumption, however, is growing more than the traditional retailer food chain. According to the Abia Department of Economics and Statistics, the retail sales showed growth rate of 7.6% per year between 1997 and 2007, while the sector of Food Service grew 13.7% per year in the same period, also according to Abia.

Figure 1. Food Service sector growth X Food retail sector growth
Another indicator that shows the growth of the Food Service sector in Brazil is that the amount spent on food eaten out of home will represent 40% of the total that Brazilians spend on food between 2020 and 2025, according to projections of Abia. In 2003, according to POF/IBGE, this expenditure was around 25%. Considering this amount, 42% were spent on lunch and dinner, meals that include fruits and vegetables.

2. Methods

As a part of this effort, studies related to the food service chain were consulted. Item 3 provides a review of those studies. Also people connected with the Food Service sector were consulted such as the Brazilian Association of Food Industry (Associação Brasileira das Indústrias de Alimentação – Abia) and the Brazilian Association of Enterprises of Institutional Meals (Associação Brasileira de Empresas de Refeições Coletivas – Aberc). This contact was very useful to visualize the needs of the sector and relate it with fruits and vegetables needs.

In March 2009, a nutritionist and an agronomic engineer responsible for coordinating the food service in institutional restaurants were consulted as an effort to provide information on food servings. Together, in 2009, these professionals were responsible for a daily number of 504,000 meals in companies all over Brazil. By e-mail, it was asked them the portions (in grams) of fruits and vegetables served to each individual in their institutional restaurants meals. For qualitative analysis, these data were compared with the daily average of fruits and vegetables in meals made at home in Brazil, collected in the 2002/2003 Survey on Family Budget (Pesquisa de Orçamento Familiar – POF) of the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística – IBGE).

3. The Food Service Sector in Brazil

“Food service” is the term used to refer to the part of the economy engaged in the provision of meals outside the home. The food service sector involves commercial establishments (i.e. restaurants and pubs) and institutional caterers (e.g. hospitals and schools) (DEFRA, 2007).

The Food service includes a service activity over and above normal shopping in delivering food to the customer. This might be providing it in a place more convenient for the customer than a major shopping outlet or providing it in a form that is ready to easily eat (DEFRA, 2007).

Besides the term “Serviços de Alimentação”, in recent years the term Meals Unit Producing (Unidade Produtora de Refeições - UPR) has also been used, meaning all
participants of the industry establishments of meals made out of home, whether commercial (restaurants, bars and the like) or institutional, as Units of Food and Nutrition (Unidades de Alimentação e Nutrição – UAN) (PROENÇA, 1997).

The commercial meals include establishments that serve individuals or groups, occasional or regular customers, open to any kind of public. On the other hand, the collective or institutional meals refers to providing food for people in the workplace (business), education (public and private schools at different levels), social service and health (public and private hospitals, asylums, orphanages) and other places (prisons, religious communities, the Armed Forces) (PROENÇA, 1997).

Figure 2: Number of restaurants in Brazil (1000 units)

Figure 3: Food and Drink Sales in UK Food service Outlets (2004) (percent, by value).
The Food Service sector is very segmented and can be divided into different distribution segments. Each segment has differences, especially regarding to the services and food offered.

In relation to the specific characteristics of each segment, can be cited: the level of quality, training of staff, creativity and breadth of menu, quality requirements of products (raw materials and final product), use of convenience products (minimally processed, frozen food), level of service to clients, utilization of equipment and sophistication in food preparation.

The aim-activities are Food Services connected to hospitals and health centers that aim to prevent, improve and/or recover the people they attend. The mean-activities are used by industries, schools and any other that gather people for a period of time that justifies the provision of meals. In this case, the Food Service activities seek to reduce accident rates, rates of absenteeism (absences and delays), improving learning, prevent and maintain people the health. Collaborate, consequently, to be held the entity's aim-activities.

Figure 4. Main Food Service establishments
One of the segments of the Food Services most significant in Brazil is the fast food. Studies indicate that the 80s was the period of growth and consolidation of fast food chains in Brazil, through the franchise. Since then, its expansion in Brazil was a gradual triumph, as in other parts of the world.

According to ABIA, the chains were responsible, in 2007, for R$ 9.5 billion. The fast food growth promotes the increased demand of vegetables in natura, such as potatoes (for French fries), lettuce and tomato. In addition, fast food chains are concerned, increasingly, to offer products that meet customers that look for healthy foods, for example salads and natural fruit juices.

The competitiveness of Food Service establishments depends on their ability to improve the quality of products and services. The sector is dynamic and new opportunities arise every day. In this context, Food Service establishments’ managers should be aware of market aspects, processes and supply chain, getting an insight into trends all over the world.

The supply management is not only managing the flow of daily purchases. It also includes the efficient administration of products logistics. Errors in logistics administration result in irregular replacement of raw materials, overstock or insufficient storage space, reflecting in menu changes for lack of prior planning (Abreu, 2003).

Everyone involved with Food Service must have commitment to quality management, even if the business is small. This process requires knowledge of law and is based on principles such as: setting standards, description of procedures, monitoring procedures, record of time and temperature and critical factors of food safety.

So to conquer these costumers (Food Service establishments), it is important that the horticultural sector increasingly understand the requirements and dynamics of supply chain dedicated to food services. According to data kindly provided by ECD Research and Consultancy in Food Service, the decisive factor regarding purchasing fruits and vegetables by companies of Food Services is the quality of the product, followed by price. This information was obtained from a research conducted in 2006 by ECD in the cities of São Paulo, Goiânia, Brasília, Curitiba and Porto Alegre. That survey also showed that the
frequency of fruits and vegetables purchases is high in Food Services establishments – these products are bought in a daily basis in more than 50% of the consulted hotels.

Concerning the quality aspect, it is important to emphasize that not only the external appearance or taste of the products are observed by Food Services establishments. A trend that is increasingly in evidence is the safety of the food – the meals must provide, in addition to nutritional quality, satisfactory sanitary conditions. It means that fruits and/or vegetables grower should obey, for example, to Norms of Integrated Production and the establishment that prepares meals, to good food handling practices (Saccol, et. al., 2006).

The food handling can be a source of contamination or transfer of organisms harmful to human health. Studies indicate that the major cause of outbreaks in food diseases is untrained manipulators, which contaminate the product because of inappropriate practices in the production of meals. To avoid contamination, should be carried out Good Practices specific to this type of food preparation, according to RDC 216/2004 – ANVISA. This resolution aims to assist in offering food with satisfactory hygienic and sanitary conditions, providing a safe and healthy meal.

Regarding suppliers of fruits and vegetables, ECD showed that “sacolões”, “ceasas” and food distributors are key to hotels, hospitals, schools, bakeries and restaurants. For these segments, “ceasas” and “sacolões” are more competitive than the distributors. However, distributors add important services such as delivery and a teleshopping service to facilitate the acquisition of products.

The Institutional Food Service or Units of Food and Nutrition (Unidades de Alimentação e Nutrição - UAN) began to emerge in Brazil with the increasing of industrialization and urbanization. In the 30s, the State began to develop the Institutional Food Service, under the management of the Food Service Management in Social Security (Serviço de Alimentação da Previdência Social - SAPS). Some entrepreneurs, following the example of the State, began to adopt the distribution of meals to their employees. As the market for the Units of Food and Nutrition is expanded, institutions emerged with goals that go beyond supporting feature (MARCON, 1997).

To improve the nutritional conditions of workers, the Worker's Food Program (Programa de Alimentação do Trabalhador - PAT) has great importance. This program is structured in the partnership between government, business and worker and has a positive impact on quality of life, reduction of work accidents and productivity increases.

According to PAT’s determinations, the types of food services that may be established by companies are:

• Self management: The company assumes full responsibility for the preparation of meals, from the hiring of staff to the food distribution.
• Outsourcing Services: The provision of meals is formalized through a contract between the company and concessionaires.

When the company (beneficiary) chooses to use outsourcing service, the types of services can be the following:

• Transported meal: The meal is prepared on industrial kitchen and transported to the workplace;
• Administration of kitchen and dining: The company (beneficiary) offers the facilities (kitchen and dining room) for the contracted company to prepare and distribute meals;
• Meal agreement: The company's employees receive their meals in restaurants using vouchers, tickets, coupons, checks, etc.;
• Food supply agreement: The company provides passwords, tickets, etc. for the purchase of food in shops, such as supermarkets;
• Food basket: The company provides food in special packages, ensuring the worker at least one meal daily.

With the increasing search of the consumers for convenience, the expectation of the Food Service industry is that the growth in recent years, estimated between 10% and 12% last year, will be maintained and can vary between 10 and 15% in 2009. Professionals who are always updating on emerging trends are more likely to attract and satisfy its customers and thus increase its competitiveness in the market. Therefore, the addition of new items on the menu is an important tool of competitiveness in all segments of Food Service. Thus, the horticultural sector can support these professionals providing diversified fruits and vegetables. It is important to emphasize that, according to Abia, considering all the types of out-of-home consumption, the most important are lunch and dinner, which usually offer salads and fruits on meals.

Figure 5. Types of out-of-home consumption


Besides the increasing demand for meals out of home, there is also the trend of increasing demand for frozen foods, ready meals and pre-cooked food for meals consumed at home. Big food industries have developed new products, adapted to the consumption trends, which means providing pre-prepared food for use in establishments that offer meals, as the trend is increasingly optimize the preparation of meals. In consequence, easy products like dehydrated mashed potato flakes are growing in sales (Abia, 2008). Furthermore, the fresh cut fruits and vegetables are gaining space in this sector.

Figure 6. Indices of Gross Value Added for the four sub-sectors that comprise the Food Chain (1998–2004) (1998 = 100) (current prices).
The development of basis agro-industry - with units producing fruit pulp, pre-fried potato and units of fresh cut vegetables - can increase the supply of processed or semi-processed horticultural products for the food industry. A concept that has been spreading in the Food Service is the “taylor made” products, which are defined as standardized and customized products. This means, the buyer may request a product that does not exist in the market yet, and require that it be provided with exclusivity and under uniform standards and custom. Therefore, through the provision of differentiated products, exigent consumers can trust on the establishments that prepare the meals. This may be a point for the competitiveness between companies. Exotic fruits or little known cultivars may be a segment to be explored by fruits and vegetables growers.

Centralized management of purchasing, made through distributors, is a universal tendency for Food Service. Using this system has been spreading in the sector at the expense of Ceasas/wholesale streamlines the supply of food and provides food safety and a better cost-effective - buying products from different sources of supply demand more time and money to the venture. Centralized management can minimize the stock, allow to always having the products that need to supply clients and have access to launches and innovations in the market. To improve the participation of the “ceasas” in this sector, it is important to understand that, besides selling the product, the services bundling (such as delivery) is a competitiveness differential (Vilela; Araújo, 2006).

In the specific case of offering meals at public establishments (kindergartens, schools, community kitchens, popular restaurants and social entities and/or charities), there are government measures that aim the supply through the production of family farmers. In the Food Acquisition Program (Programa de Aquisição de Alimentos - PAA), the government purchases the products during the harvest, with waiver of bidding, with prices that cannot be higher or lower than those in regional markets. These products can be used also for social programs that provide public assistance to the populations at risk food. To participate in the PAA, the producer must be identified as family farmer through the Declaration of Fitness of Pronaf (Declaração de Aptidão do Pronaf - DAP).

4. Dimension of the Fruits and Vegetables Consumption in the Food Service Sector
There is no consolidated statistics on fruits and vegetables consumption in Brazilian Food Service sector. As an effort to obtain data for qualitative analysis, it was asked a nutritionist and an agronomic engineer the portions (in grams) of fruits and vegetables served to each individual in the meals served in the institutional restaurants they are responsible for. These findings showed that companies in this segment promote, per person, the consumption is 100 grams of vegetables and about 100 grams of fruit per meal in institutional restaurants. It was considered, based on the interviews, that the average consumption is around 200 grams of fruits and vegetables per meal/person.

Compared to the daily average of meals made at home, the consumption in institutional restaurants is superior. According to POF/IBGE (2002/03), the daily consumption at home is 80 grams of vegetables and 67 grams of fruit per person.

Considering the estimated made from interviews for this article, which indicates that the average consumption is around 200 grams of fruits and vegetables per meal, it would take 200 hectares/day of fruits and vegetables (converting to the average productivity of horticultural) or 73 thousand hectares/year to achieve the potential of this sector.

According to the Brazilian Association of Institutional Meals Enterprises (Associação Brasileira de Empresas de Refeições Coletivas - Aberc), the collective meals market has potential for more than 40 million meals per day, 23 million for companies and 17 million for schools, hospitals and the Armed Forces. However, according to Aberc, a very small fraction of this market is explored.

5. Final Considerations

There are many places where Brazilians can eat out of home. The places that provide fruits and vegetables in greater quantities are restaurants (commercial or institutional), especially those with buffet, which usually offers various salads, vegetables and, to a lesser extent fruits. Considering the menu organized by nutritionists for institutional restaurants, for example, the consumption of fruits and vegetables in a single meal may be higher than the amount consumed at home over a whole day. The reason of this behavior is mostly because of the higher availability and diversity of fruits and vegetables in restaurants.

Therefore, the food safety should not only be a concern, but a requisite to Food Service establishments. The meals provided should show, as a result, good nutritional and sanitary qualities.

In the sector of meals made out of home, there is space for fruits and vegetables, for example, in these segments: commercial restaurants, fast food chains, cafeterias, Rotisserie, industrial meals, school feeding (both public and private sector), catering (air or sea), hotels, bakeries and bars. For the horticultural sector, the most important segments are the ones that serve meals (lunch/dinner) as the commercial restaurant, fast food chains and the collective meals service.

Therefore, the main suppliers for this sector are the central supply and distributors. The last one gets more space because offer personalized services to this segment as delivery of product and a responsive service in the application and billing. The central supply - Ceasas - will have to add more services to get more space in this sector.

Another important agent in this chain is the agribusinesses and units of fresh cut products. They also add important services such as convenience in preparation of meals in restaurants, for example. Thus, the link which joins the production of fruits and vegetables to Food Service are the players that add services. Make these agents more prepared to meet the needs of this sector is the key to increase production of fruits and vegetables. Even the producer can provide some services, such as semi-processed product and the logistics of
delivery. But hardly an individual producer will have the variety of horticultural products that meet all the Food Service demand.

Therefore, the distributor, the units of fresh cut products and agribusiness are increasingly important partners in the productive sector of fruits and vegetables. The best capacitating of them in perspective to meet the demand of Food Service through partnerships with the productive sector is the basis for the efficiency of this chain. Better integrate Food Service

Although the Food Service still has not coordination enough to require different products or services from the horticultural sector, it is already part of the supply chain of fruit and vegetables. Further integrate Food Service with the horticultural production chain is a challenge and an opportunity for agricultural and agribusiness sectors. It is vital that the producer makes partnerships with stakeholders that provide services to this sector.
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