

THE PEAR TREE CULTURE IN BRAZIL

The pear tree is the only relevant fruit tree, from temperate climate, whose planting area is not yet fully developed in Brazil. It is also one of the least studied species in our country. This stagnation or unimportance is due to the low productivity and quality of fruit obtained so far, mainly due to the lack of cultivars with high quality fruits which are well adapted to the low hibernal cold conditions existing in the country. Other factors also contribute, such as the lack of information concerning to the performance of rootstocks, the inadequate control of pests and diseases, the lack of long-term financing for the establishment of new plantations, the lack of availability of high quality seedlings; the deficiency in the management of plants and the competition from other fruit trees of fast economic return such as the apple tree.

About 90% of the pears consumed in Brazil are imported. In 2008, it was imported 139 thousand tons of pear at a cost of US\$ 120.6 million (FOB). These quantities of pear represent the highest of the total of fresh fruit imported by Brazil: 54.8% in volume and 49.6% of value. Pears with high quality produced here supply only a small part of the market and only between the months of February and April. After this period, there are only imported fruit market, mainly from Argentina, Chile, USA and Portugal.

Commercially, it is possible to divide the pear in two types: European and Asian. The European (*Pyrus communis*) pears are the most consumed in Brazil and have piriform shape and buttery flesh when ripe, as example the cultivars Williams (Bartlett =) Packhams Triumph, Anjou, Rocha and Abate Fetel. The Asian Pears can be divided into Japanese and Chinese. The Japanese pears (*P. pyrifolia* var. *culta*) have rounded fruits. The Chinese pears (*P. ussuriensis* and *P. bretschneideri*) have more piriform shaped fruit and pulp less sweet and less juicy than the Japanese.

The European pear production, of high quality, is concentrated in Rio Grande do Sul and Santa Catarina, the Chinese pear (cv Yali), in Parana, Santa Catarina and São Paulo. Small planting areas of Japanese pear of high quality are located in Santa Catarina (about 131 ha), Parana, Rio Grande do Sul, São Paulo and Minas Gerais.

For the little diffusion and understanding of the population, but of high fruit quality and yield potential, it is presented, with special attention, studies on Japanese pear, which the main varieties planted in the south of the country are the cultivars Housui, Nijisseiki and Kousui. Over the past decade, the planting of cv Housui has increased and the planting of cvs Nijisseiki and Kousui have decreased. This last one, despite of the great flowering, produces small fruit and is highly susceptible to drought of the branches. In São Paulo, it is planted more of Japanese pears cultivars Atago and Okusankichi of lower commercial quality. The fruits of Japanese pear are rounded and have brown or green-yellow bark, the flesh is white to pale cream, soft, very juicy and sweet, and the flavor is smooth and discreet. They should be harvested when ripe and not when they are still unripe, as is done with the European pear. It is

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better to taste the fruits cold and without the skin.

Surveys indicated an excellent market acceptance of the Japanese pear by the consumers, being the Brazilian preference for fruit with average weight of 250g. The final price at supermarkets has ranged between R\$ 3.00 and R\$ 6.00 / kg. In select markets, as specialized grocery stores, the price is higher, and the fruits of greater weight reach higher prices, especially the ones bagged during the plant fruit development.

There are several pear cultivars currently being tested, especially by experimental stations from EPAGRI, from EMBRAPA and IAC. In Epagri / Experimental Station of Caçador, is located the largest Pear Germplasm Bank of Brazil, in which there are 34 Asian-type access and more 164 access of European cultivars and hybrids. Because of the climate change in progress, it becomes strategic to research and to introduce new pear cultivars, more suited to the soil and the climate conditions of southern Brazil.

In this context, it is necessary to increase researches and the consequent tranference of information about pear tree culture to farmers and other governmental institutions, aiming to increase the planted area. Thus, it will be offered another important option of income, and the development of the culture will bring foreign exchange to Brazil.

A good source of information about the pear tree culture is the book edited by Epagri/Jica: "Nashi, the Japanese pear".

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