

## Montevideo, April 19-21, 2023

## GEOGRAPHICAL INDICATION FOR KIWI FRUITS PRODUCED IN THE SOUTHEAST OF BUENOS AIRES PROVINCE, ARGENTINA

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## Abstract

Quality differentiation in food production, including certification of specific standards or attributes, makes possible to obtain better prices and differential access to markets or specific niches of external and domestic demand in medium-high and high incomes segments.

These activities usually involve intensive productions, integrated into highly specialized production chains, which imply not only agro-industrial transformations, but also include relatively complex personal and productive services, as well as sophisticated distribution, communication, and packaging channels.

Fruit production in the southeast (SE) of Buenos Aires, Argentina, is a labor and capitalintensive activity, generates high profitability in small areas and mobilizes the local and regional economy. Kiwi fruit production in this region has increased steadily over the last ten years in terms of area, volume and infrastructures and recently has incorporated new packaging facilities and cool rooms. The region is the most important and productive zone of kiwi in the country (David et al, 2018). A favorable climate and very suitable soils allow achieving excellent quality fruits and high yields per surface unit.

Kiwi is currently one of the most profitable fruit crops in the country. According to estimates, Argentina produces 9,000 tons annually, a scarce volume to supply the domestic demand, so approximately 7,000 to 7,500 tons are also imported per year. Of the total foreign volume, 50%-60% comes from Chile, which competes with national production (SENASA, 2021). The rest of the external fruit comes mainly from Italy, obtained in the off-season period. The export activity is increasing in the last two years. reaching a volume of 3000 tons exported during the harvest months (May and June) mainly to Italy. The largest proportion of domestic production is storage in cold rooms, with or without controlled atmosphere, to defer the sales in the domestic market.

Kiwi producers in the SE range from small businesses to large investors, some of them associate with marketing companies or with experience in intensive agricultural production. According to cultivated area, the identified strata of producers are: 1) Producers of up to 10 ha (77.3% of the establishments) that explain the growth in the number of orchards; and 2) Producers of more than 20 ha (accounting for the 57,8% of the total implanted area) that are responsible for the expansion in hectares (Bocero and Bonnet, 2017).

In 2012, most of the SE producers became associated, founding the Mar del Plata Chamber of Kiwi fruit Producers, with the aim of obtaining a quality fruit recognized in the market. They developed harvest and post-harvest protocols with the intervention of INTA (EEA Balcarce) and the Faculty of Agricultural Sciences (UNMDP), which were applied on a voluntary basis with the idea of making SE kiwi quality known by the wholesalers' operators. Recently, in May 2022, the protocol of production of "Kiwi Mar y Sierras of the SE of Buenos Aires" was approved and the recognition, registration, and protection of the homonymous Geographical Indication was granted (Res. Ministry of Agriculture 33/2022). This differentiation attribute identifies the kiwi produced in the region.

Previously, in 2020, the Chamber, the Municipalities of the region and INTA EEA Balcarce with the coordination of Mar del Plata University (UNMDP) worked together as part of a UNMDP research project to achieve the Ministry of Agriculture's IG requirements. The studies carried out, for a comprehensive approach to the subject, proposed three work modules with complementary analysis dimensions, referring to: I) The quality perceived by consumers in the region and those responsible for wholesale marketing, to effectively distinguish the key differentiation attributes; II) The objective quality, from an agronomic perspective, with parameters that made it possible to compare the local kiwi fruits with other imported ones available in the area; and III) The quantification of the value-added by the production of kiwi and its contribution to the potential growth of the region.

The research results within the framework of module I, show that the consumers participating in a tasting experience of local and Chilean products (without being able to effectively identify the origin), highlighted the greater balance of sweetness and acidity of the flavor and the firmness of the pulp as attributes that supported their preferences towards the fruit of the region. Those responsible for wholesale marketing recognize that the flavor of SE kiwi is superior and associate it with the level of ripeness of the product at the time of harvest. Imported products do not arrive at local markets in the same conditions, although most of wholesalers' customers (retailers) are relatively more interested in price than in product quality.

The analyzes of module II indicated that the local kiwi maintained adequate firmness during the period that simulated the time of wholesale and retail commercialization in the domestic market. It was observed that the variables associated with the organoleptic characteristics

(higher TSS level and, above all, acidity), which are associated with a better final flavor of the fruit, were higher in the regional fruit compared to the fruit of Chilean origin.

Finally, in module III, the research concludes that SE kiwi production is a "regional cluster" because the farms are located nearby and have links between them. Trust relationship, collaboration, and joint activities around product quality and promotion, deepen collective actions. The links among producers have origin and are sustained by a set of actions: purchase of inputs, hiring of temporary workers (harvest time and pollination), use of machinery and facilities (cold rooms) and the association to commercialize greater volumes of production. There are linkages in the macroeconomic level with institutions like INTA, SENASA and Buenos Aires government framed by subsidies, tax exemptions or loans. In the microeconomic level, the sector is competitive because the producers interviewed recognized to have been capacitated in technic, legal and commercialization topics.

Based on the information collected in the interviews, a preliminary estimation of the valueadded by the activity in the region was obtained. According to the data cost, the average intermediate consumption coefficient ups to 0,40 and, consequently, kiwi production in the region generates value-added for 900 million of pesos. This means a real growth of 500% between 2012 and 2021.