

# Feeding Barcelona

City, food supply and health



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Stove and cookpot. 15th-16th centuries. MUHBA

Feeding the population has always been a concern for cities. It has been a decisive key factor in their relationship with territories of variable extension (according to their geopolitical situation and transport conditions), in the development of technologies for obtaining food products over the course of the centuries, and in the social conditions (of varying inequality, depending on the point in time) under which their men and women have been able to obtain nourishment and sustain life.

Guaranteeing food supplies and food safety was one of the main occupations of the *Consell de Cent* (Council of One Hundred), the municipal institution created in Barcelona in 1249, from its very inception. Ever since then, the city's government has strived to guarantee food supply and quality, either because this was its direct responsibility, because it was acting in a subsidiary fashion or, alternatively, because it was seeking alternatives to insufficient action taken by other authorities.

Intervention by the municipal government has continued up to today, with an active network of municipal markets and with Mercabarna, the great food pantry of Barcelona and the western Mediterranean area, as well as supplier to the majority of cities in Europe. This long history of decisive municipal involvement in the food supply is a historic singularity of Barcelona that is not found in any comparable way in the majority of European metropolises.

# 1 The Council of One Hundred and Barcelona's food supply (1249-1714)

From the 13th century onwards, Barcelona ceased to be a small city. Its incorporation into the Mediterranean trade routes boosted its artisan production and financial activities and, despite cyclical crises, generated a sustained prosperity that favoured its urban growth and the presence of a rich elite citizenry enjoying close relations with the monarchy. The influence of these *probi homines* was consolidated when the king granted the creation of the first municipal government of Barcelona (1249), which transformed the city into a political entity with broad self-management capacity until the abolition of the *Consell de Cent* (Council of One Hundred) in 1714.

Among the responsibilities progressively acquired by the municipality based on the principle of “the common good” were the city’s food supply and its healthcare policy. Social peace depended on bread prices and on access to other basic foodstuffs, especially during periods of shortages and epidemics that repeatedly afflicted the city and could give rise to much-feared rioting.

## 1.1 A LASTING SYSTEM FOR MUNICIPAL FOOD MANAGEMENT

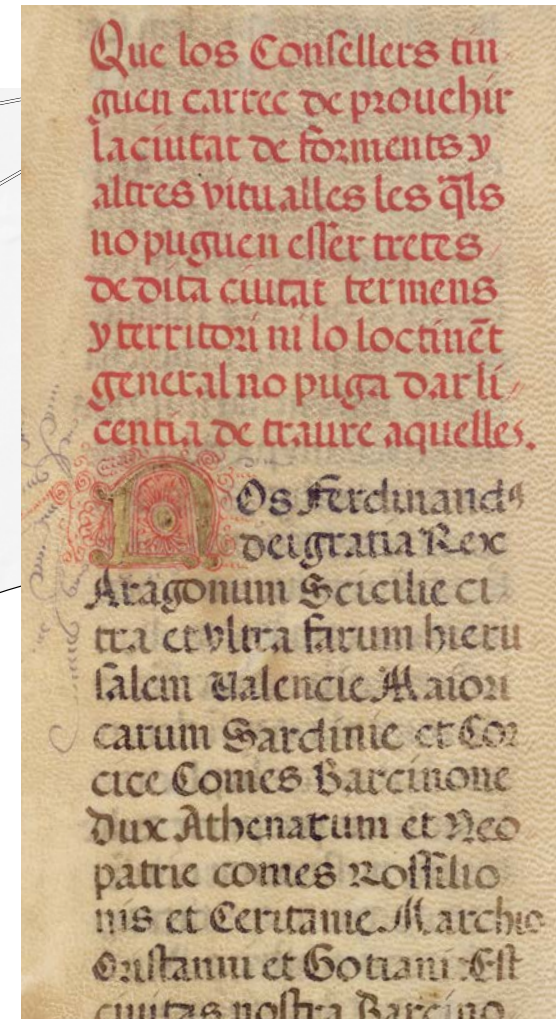
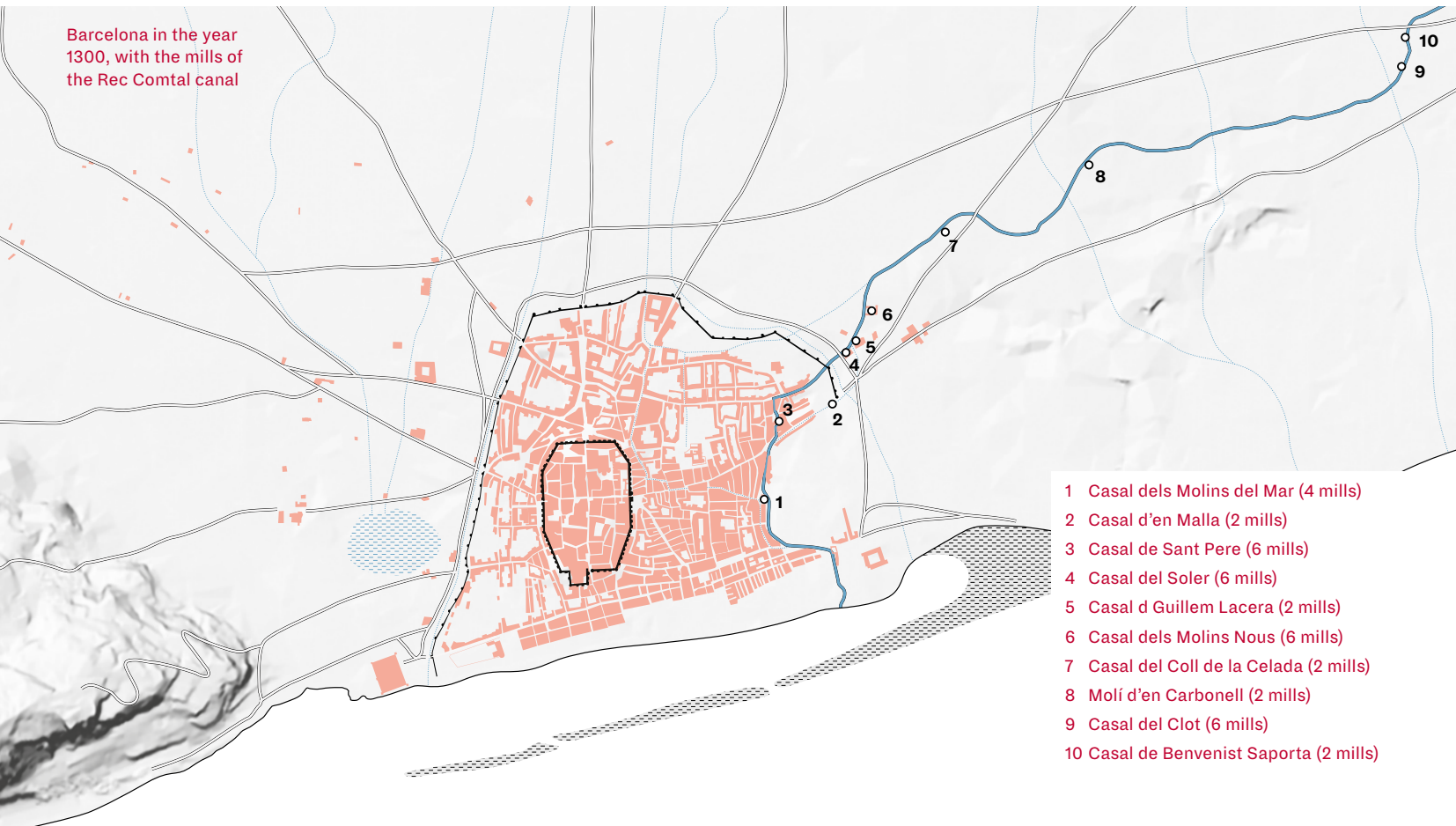
### The legacy of the Counts of Barcelona

As the main civil authority, the Counts of Barcelona had the responsibility for acting to ensure that the city did not lack basic foods, but the counterpowers of the vice-counts and bishops limited their functions. In the 11th century, the Counts ultimately asserted their authority and managed to intervene in the bread cycle: from flour milling at the Rec Comtal irrigation canal to dough-making and baking at the municipal bakeries, including their monopoly over flour weighing. They also took over control of the market (taxing produce entry and measurement), of butchers, and of fishmongers. The revenues provided by these activities stimulated public intervention in food supplies and consolidated the power of the Counts and royalty.

### Preventing hunger and protecting health

In the 14th century, the municipality managed to secure transfer from the monarchy of responsibilities for food supplies and public health. The privileges of *Vi vel gratia* (1328) and *Annona* (1511) constituted two milestones because, in the case of shortages, the former enabled grain transports passing close to the city to be seized, and the latter enabled a ban on wheat leaving the city, even in opposition to the viceroy. In addition to guaranteeing and subsidising grain for breadmaking when necessary, the municipality supervised the supply and quality of other foods such as meat, fish and wine. To fund itself, it established a tax system based on *imposicions* or indirect taxes on sales.

Privilege of the *Annona*, year 1511. Copy included in the *Llibre Verd III*. AHCB



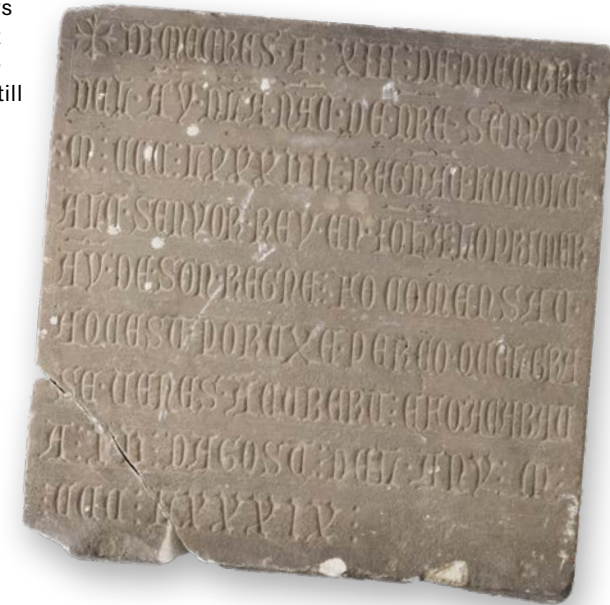
## Controlling routes, building infrastructures

Guaranteeing food supplies required the controlling of transport routes and the maintaining of spaces for supply and distribution. Barcelona needed a large amount of cereal, which arrived above all on boats and which it often imported from Aragon and from inland Catalonia, along the Ebro River route, and also from Sicily, Sardinia, and Provence. The municipality would send informers to keep an eye on the harvests and prices and to order its purchases. Other basic foodstuffs, such as meat, would arrive overland and strictly through private initiative, but the municipality defended pastures, controlled farmyards and slaughterhouses, and negotiated the numbers of animals that had to be slaughtered as well as the sales prices.



View of the wharf of Barcelona just before its extension (only with the late-mediaeval breakwater), realized by the painter Rafaella Puig, c. 1590. BC

**The Corn Exchange** To protect the grain that reached the port, centralise its distribution and put an end to stockpiling, the municipality built the *Porxo del Forment* (Corn Exchange) in 1389. In 1516, the construction began of an annexed porch and the old building was used to house the municipal bakery (1537) and the ovens. Between 1553 and 1615, the whole complex was extended and upgraded to also house the city's Armoury. Having abolished defensive autonomy following the Reapers' War, the viceroys reclaimed the building and renovated it as the new Royal Palace, but in the late 17th century, the *Consell de Cent* was still planning to replace the lost building by a new granary.



→ Stone plaque commemorating the founding of the Corn Exchange, 1389. MUHBA

↓ Design of the planned elevation of the new granary, 1693-1705. AHCB



**The route from the Ebro to the seashore**

Cereal from inland Spain descended the Ebro on boats to the Delta, where it was loaded onto ships that transported it to Barcelona. The town of Tortosa could tax the traffic and confiscate grain in times of shortage. So to avoid Tortosa, in the late 14th century, Barcelona purchased the riverside baronies of Flix and La Palma d'Ebre and in the following years invested over 30,000 gold florins in the construction of porches in Flix and Banyoles (Tivissa) and a new route by which the grain was transported, using animals, to Miramar (Mont-roig beach area) to embark it towards Barcelona.



View of the wharf of Barcelona during the final phase of the extension works. *Libro de armas y blasones de diversos linajes y retratos*, attributed to Rafaela Puig, c. 1616. BNE



Cereals Route along the River Ebro to Barcelona in the 15th century

**From the Mediterranean to the quayside** With the incorporation of the cereal-growing islands of Sicily and Sardinia (which also gave access to grain from Provence) into the Crown of Aragon, the northern maritime shipping routes of the western Mediterranean gained importance in the food supply chain of Barcelona, to the detriment of North African cereal. Resorting to Atlantic markets became more occasional, but other foods came from there, such as salted fish, including cod from the 16th century onwards. The boats that arrived in Barcelona unloaded on the beach, until the municipality finished building the first artificial quay in 1487, constructed thanks to the anchorage fee that was a tax on the goods unloaded. Between 1590 and 1623, the city extended it with two additional sections.

Valencia pitcher with merchant's marks, found in Barcelona, 15th century. MUHBA



## Between the king and the city: market supervision by the clerk of the market

The city also managed to persuade the monarchy to transfer to it the regulation of the market and the health and safety of foodstuffs. In the year 1339, King Peter the Ceremonious granted Barcelona its own *mostassà* (clerk of the market), based on the Valencian model, of Islamic origin. This was a royal official, appointed annually upon the proposal of the municipality, who supervised and marked the weights and measures to prevent fraud, checked the quality and condition of produce, confiscated adulterated foods and exercised urban planning functions. The fines for infringement were divided into three parts: one for the king, one for the municipality, and one for the *mostassà*.



↗ View of Barcelona from Montjuïc in 1535. Georg Braun and Franz Hogenberg, *Civitates Orbis Terrarum*, 1572. AHCB

← Weighing with a scale. Miniature of the manuscript *Dels dits i fets memorables* by Valeri Màxim. AHCB

## Waste and local agriculture

Waste from the households and shops of mediaeval Barcelona was scant. Items were not cheap to buy, so they were mended, patched up or restored and resold second-hand. The main part of the waste was made up of organic matter, which was used as fertiliser in the numerous urban market gardens and the fields of the Barcelona plain. It was mixed with manure and with human excrement, extremely valuable in the absence of other fertilisers. In exchange, Barcelona was better supplied with seasonal vegetables, salad and fruit, which the farmers could sell directly or through resellers.



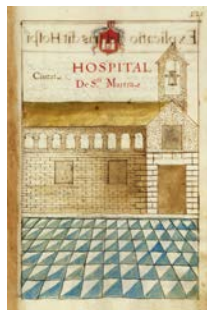
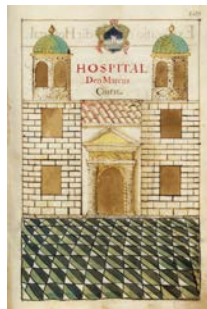
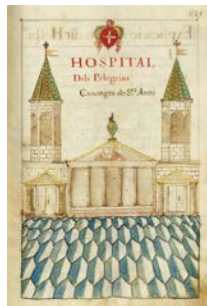
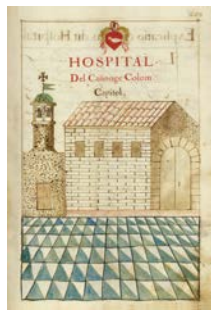
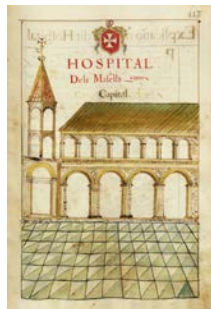
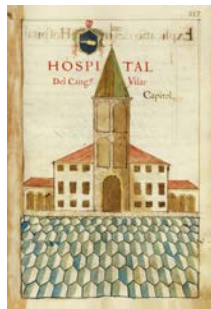
Chamber pot, 16th century. MUHBA



# Care and health policy at the Hospital de la Santa Creu

The municipality also took charge of charitable initiatives together with some religious institutions. In a society impregnated with Christian morality, it was another way of containing the unease caused by inequalities. In 1401, the *Consell de Cent* agreed with the Cathedral the merging of six small Barcelona hospitals into the new Hospital de la Santa Creu, providing economic backing. The hospital complex was completed over the course of the 16th century and, in the 17th century, the House of Convalescence was added. In addition to therapeutical treatments, the institution tried to improve the physical condition of patients and of poor people housed there with the food and the rest that it provided for them.

Hospitals merged at the Hospital de la Santa Creu in 1401. Illustrations included in the *Llibre que conté tot lo principi de l'Hospital general de Sancta Creu y de la Convalescència*, 1674. FPHSCSP



**The restorative diet: stews and poultry** The diet of the poorest people was usually deficient in proteins and fats. Therefore, when they were admitted to Hospital, the Hospital tried to improve the physical condition of the weakest by offering them stews and poultry to eat. The medical culture of the time attributed great healing powers to poultry, which was a food typically eaten by the elites and was beyond the everyday possibilities of the poor.

↑ Status or guideline expressing the ordinary or extraordinary daily ration and other utensils corresponding to the poor convalescents and officials employed at the House of Convalescence [...], 1757. Includes the rations of food provisions distributed daily to the patients and staff of the House of Convalescence, as well as sections on extraordinary rations and tasks associated with the vegetable garden and with the laundry service of the Hospital. FPHSCSP

← "Charitas" Plate. 17th century. MUHBA



**Babies and wet nurses** Due to the significant number of maternal deaths in childbirth and high rates of poverty, many babies ended up in Hospital. To feed them, the institution paid a large number of wet nurses, who often kept children with them until they reached the age of two years. Then they would return them to the Hospital, which fed and clothed them until, at around the age of seven years, the Institution sought someone who would take them in as apprentices of a trade or as maids, taking care of their maintenance in exchange for their work.

## Lights and shadows of a model: deficits, excesses, and diseases

The city of Barcelona's food supply policies had an unequal impact on the health of its inhabitants. Analysis of skeletal remains recovered in archaeological digs helps determine their reach and effectiveness. Diseases such as diffuse idiopathic skeletal hyperostosis or dental caries offer a testimony of rich nutrition, whereas, in contrast, dental hypoplasia or rickets are evidence of nutritional stress or vitamin D deficiency in childhood. Other diseases, such as tuberculosis, point towards low living standards and the relationship between humans and animals.

Works of charity. *Saltiri anglocatalà*, Ferrer Bassa, c. 1346. BNF



**Diffuse idiopathic skeletal hyperostosis (DISH)** Male individual aged between 50 and 80 years. The important ossification observable on the anterior surface of the thoracic vertebrae is characteristic of DISH and is related with obesity and metabolic syndrome. Remains from the dig at Can Cadena (17th century).



**Tuberculosis** Female individual aged between 21 and 35 years. The perforations on the anterior surface of the vertebrae and the limited creation of new bone point towards probable tuberculosis in the initial stage. This slowly progressive infectious bacterial disease is transmitted from person to person through respiratory transmission, but also from domestic animals to humans through the consumption of meat or dairy products. Remains from the dig at Can Cadena (17th century).



Further case studies:

**Rickets** Adult male individual. The femoral diaphyseal curvature suggests that this individual suffered from vitamin D deficiency in childhood, but managed to overcome probable rickets. This is an example of nutritional stress in the growth phase. Remains from a dig on Carrer de les Caputxes (14th-15th century).

**Caries and dental hypoplasia** Probable male individual aged between 16 and 20 years. Caries is related with a high consumption of carbohydrates such as sugars. In contrast, dental hypoplasia is linked to systemic stressors due to malnutrition or disease during development. Remains from the dig at Can Cadena (17th century).

## 1.2 NOURISHING A MERCANTILE CAPITAL

### The diet of a Mediterranean city

In late medieval and modern Barcelona alike, as in all the other western Mediterranean cities, wholemeal bread constituted the dietary staple, representing up to 70% of the diet of the popular classes. It was supplemented by vegetables and seasonal fruit, legumes, eggs, cheese, and meat, above all lamb and pork. Consumption of fish completed the diet, especially during periods such as Lent and other days of fasting. Wine and olive oil provided essential complements of calories. Among the elite classes, who consumed whiter bread, proportions were altered because they multiplied the quantity and diversity of proteins.

### The spaces of urban food supply

Supplying a city with 30,000 mouths to feed was a complex activity that required a host of spaces and supervision mechanisms. Close to the Baixada de la Llibreteria and the Plaça de L'Àngel were the market, and Places (squares) named after *Oli* (olive oil), *Blat* (wheat) and *Carnisseria Major* (main butcher's shop). Meat was also sold in the Boqueria market and close to Santa Maria del Mar church, and poultry was sold in the Plaça Nova. To the east of the *Llotja* (stock exchange) was the Fishmonger's and the *Porxo del Forment* (housing the municipal bakery and ovens), which opened out onto the Plaça del Blat de Mar (wheat from the sea); to the west was the Plaça del Vi (wine). The animal pens were in the outer part of the Portal de l'Àngel and the slaughterhouses at the Boqueria market and along the final stretch of the Rec Comtal canal. The *Consell de Cent* regulated the organisation and cleaning and funded building works and extensions.

Bird's-eye view of the city of Barcelona (detail), 1697. AHCB

1. Stockyards; 2. Butcher's on Carrer Comtal; 3. Plaça de la Verema (seasonal sales of grapes); 4. Carrer de la Palla (straw); 5. Plaça Nova (market selling vegetables, poultry and cheeses); 6. Plaça de l'Oli (oil and also vegetables, poultry and cheeses); 7. La Boqueria vegetable market and La Rambla butcher's (from 1602); 8. La Boqueria market abattoir (butchers); 9. La Boqueria fish market; 10. Main abattoir (butchers); 11. El Call butchers; 12. Market and Plaça de Les Cols (vegetables); 13. Plaça de l'Àngel, previously Plaça del Blat de Dalt (wheat); 14. Flour weighing; 15. Pont de Campderà butcher's; 16. Plaça del Born (market selling vegetables, poultry and cheeses); 17. El Mar abattoir (butchers); 18. Pla d'en Llull (weighing of firewood); 19. Portal del Carnalatge (from 1571) and abattoir; 20. New Fish Market (until 1598) and vegetable market; 21. Plaça del Vi (wine) and Els Encants market vaults; 22. New Plaça del Blat (wheat); 23. Royal Palace, former Corn Exchange and Municipal Bakery (until 1667); 24. Windmills; 25. La Ribera Fish Market (from 1598); 26. Pla del Palau, former Plaça del del Blat de Mar (wheat); 27. Customs; 28. Fishermen's huts



## Measures and weights

The regulation drawn up by the *Consell de Cent* determined the units of measurement that could be used in transactions. Every year, the *mostassà* (clerk of the market) issued an order to compare all of the city's weights and measures with the reference units custodied by the municipality, and put the corresponding mark on those that had been inspected, so that they could be recognised by customers. According to the type of product (dry goods, liquids, etc.) traders used one basic unit or another, with their corresponding multiples and sub-multiples.



- ↑ Measure for dried fruits and nuts. 1572.
- Capacity measure for liquids (olive oil), 16th-18th centuries
- ↓ Measuring cup with the city's coat of arms, 17th-18th centuries. MUHBA



## Preparation and transformation of food

Foodstuffs are not always ready-to-eat. Often, they require a process of preparation and cooking to transform them into a form digestible by the human body while giving them a taste, aroma and aspect that appeal to the senses. Precisely for this reason, the quality and diversity of products consumed and the level of complexity of culinary techniques have been direct indicators of people's social and economic position.

*Libre de doctrina pera ben servir, de tallary y del art de coch* (Doctrine book on proper serving, carving, and the art of cooking). Barcelona, 1520. Robert de Nola. CRAI UB



## Laying the table, social class, and representation

Eating is a social act and the dining room is a space for relations. This is why, as well as the quality and quantity of the food, the way it is served and how the table is laid have been elements of representation as well as good indicators of the social and economic status of a home. In Medieval and modern times, modest tables had practically unadorned wooden, metal, or glazed ceramic plates and cups, while the well-to-do, especially for banquets and special meals, showed off their best decorated tableware and fine goblets of glass or crystal.

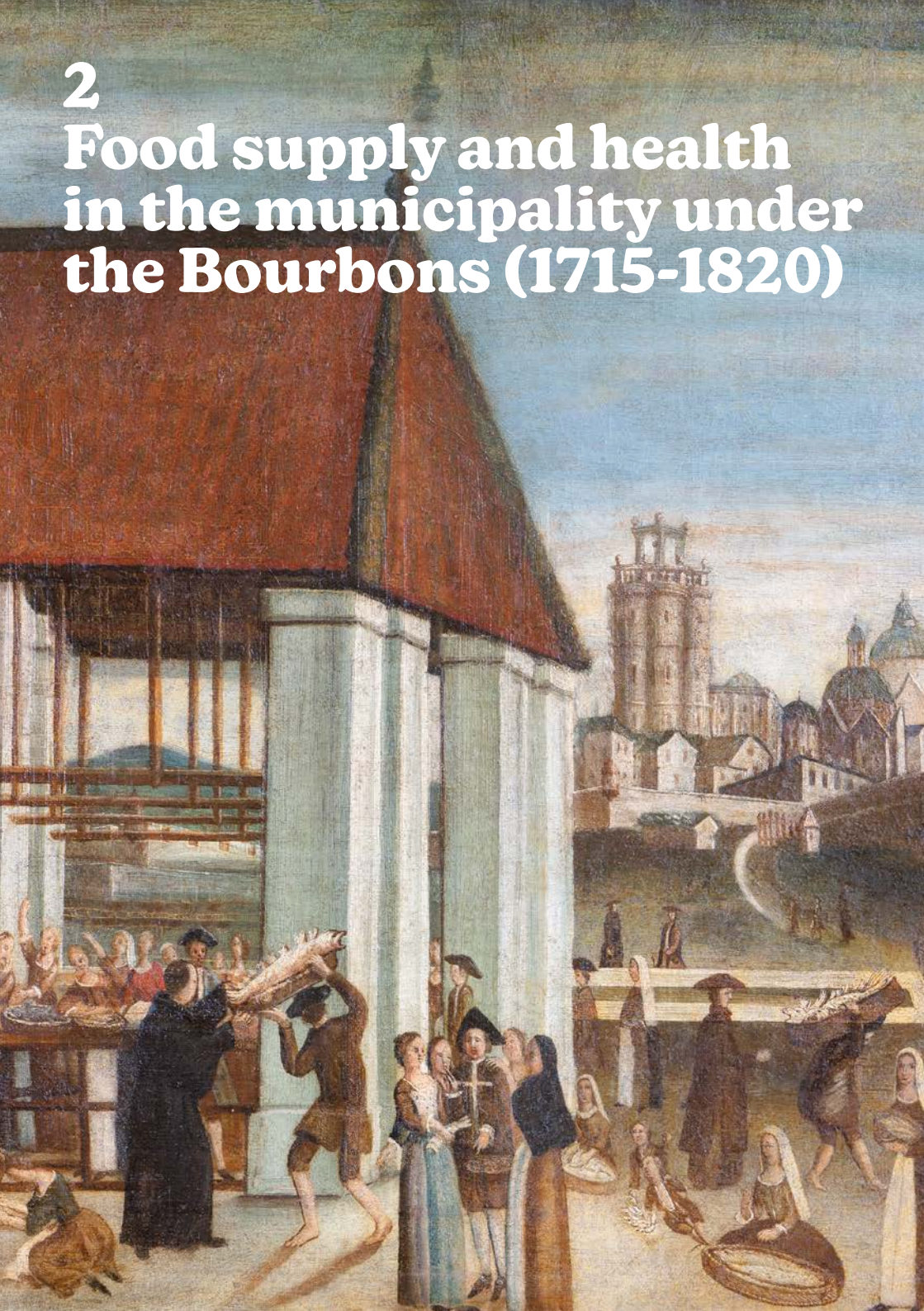
Detail of the *Sant Sopar* in Santa Constança de Linya church, 15th century. MDCS



- ↑ Decorated plate, 14th-15th centuries. MDB
- ← Pitcher, 17th century. MUHBA
- ↓ Wooden spoon, 18th century. MUHBA



## 2 Food supply and health in the municipality under the Bourbons (1715-1820)



The defeat of 1714 led to the suppression of the *Consell de Cent* and the confiscation of its assets. The Decree of the *Nova Planta* imposed the Castilian city-council model, i.e. composed of aristocrats appointed as councillors by royalty, presided over by a *Corregidor* (chief magistrate and mayor) who watched over compliance with the sovereign will, as determined by the viceroy and the advisory council, the Royal Agreement of the Royal Court of Catalonia. The city council lost its fiscal autonomy and accumulated a great debt due to non-fulfilment of the transfers that the Royal Treasury was supposed to make to it.

Among the communal assets confiscated were the major food supply infrastructures, with the consequent disappearance of the municipal workers who managed them. However, the Royal Provision Order continued to assign the “provision and supply of bread” and “of meat” to the municipality. Responsibilities for public health matters were returned to the city’s government as an emergency measure due to the plague of 1720.

El Bornet of Barcelona (detail).  
Anonymous, c. 1775. MUHBA

## 2.1 A CITY COUNCIL THAT INTERVENES WITH ITS AUTHORITY TAKEN AWAY

### Supplying food with few resources

Despite the loss of rights, the city built a new municipal bakery and maintained the monopoly over breadmaking until the publication of the 1765 Royal Decree that determined bread sales without subsidies and a liberalised market, measures imposed in Barcelona by an order issued by the Royal Audience of Catalonia in 1767. However, the liberalisation soon proved incapable of tackling the shortages. The increase in bread prices and its poor quality led, in 1789, to the *Rebombori del pa* (bread riots), which spread to other Catalan localities. Shortly afterwards, the municipality had to resume the subsidised supply of bread, which led to its bankruptcy due to debts in 1799.



Organisation chart of the municipal government produced in commemoration of the reform of the clock bell tower, 1763. AHCB



### The Health Board

The outbreak of the Great Plague of Marseille in 1720 forced the return of responsibilities for health and sanitation to the municipality, which performed them through a specific committee, the Health Board. This checked or issued the licenses demanded of boats, established controls at the entrances to the city, and promoted hygiene and health regulations. It also took on food health and safety responsibilities from the defunct clerk of the market with respect to supervising the state of the more sensitive foodstuffs sold in the city.

Health certificate with a view of the city prominently featuring the new artillery platform designed to protect entrance into the port. 1721. AHCB



## 2.2 THE CONNECTION WITH THE AMERICAS

### The spread of colonial foods

The new products that arrived from the Americas met with an unequal reception. While chocolate and coffee quickly became well accepted, other products such as tomatoes, peppers and turkey took longer to become consumer products. Some, such as potato or corn, were considered as food for livestock until shortages forced their consumption, well into the 19th century. Initially some of these products were elitist, reserved for the wealthier population. Accordingly, drinking chocolate in the afternoons was accompanied by an exquisite ritual with specific utensils, such as special chocolate pots, chocolate cups and trembleuses. But the liberalisation of trade with the Americas between 1765 and 1778 facilitated their progressive social spread and, at the same time, notably boosted the consumption of sugar in the city.

↓ Manuscript of *Calaix de Sastre*, Rafael d'Amat i de Cortada, baron of Maldà, written between 1 January and 30 June 1800. On 3 February, it describes a soft drink. AHCB

### Civil initiatives

Military occupation and political subjugation did not put a stop to civil initiatives. Entrepreneurs took advantage of the opportunities offered to them by military supply and works contracts. By the 1840s, Barcelona was once more on the road to prosperity. In 1756, the Royal Company of Commerce of Barcelona was founded, and two years later, the Board of Commerce; a little later came the liberalisation of trade with the Americas. The city became a port for the reception and distribution of sugar and cocoa and an exporter of brandy, while it imported cotton, the basic material for a local textile industry centred firstly on calico-printing of Indian cloth and later on spinning. This growth led to a doubling of the population which reached 100,000 Barcelona residents.

↑ Sketch for advertisement, 1826. AHCB

→ Ceramic tile picture, second half of the 18th century. MDB

↙ Ceramic tile, 18th century. MUHBA

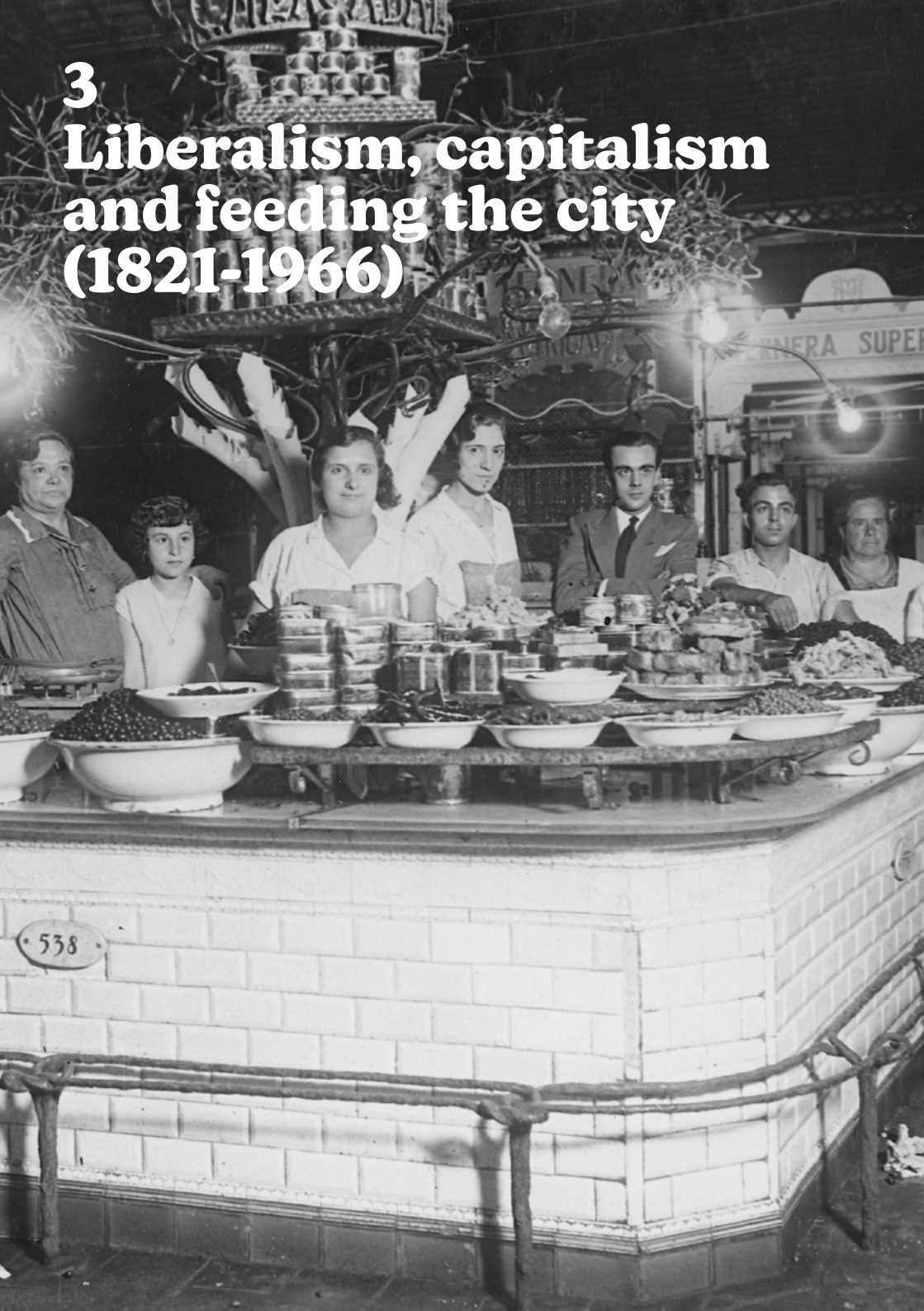


**The expansion of market gardens on the Pla de Barcelona** Urban densification over the course of the 18th century, caused by the multiplication of calico factories and the associated population growth, favoured new constructions on the still cultivated lands of El Raval. This reduction of space for market gardens inside the walled city spurred the progress of fresh product cultivation along the riverbanks of the Llobregat and the Besòs. Women farmers and resellers continued to play a leading role in the Barcelona market for greens and vegetables, poultry and eggs.



ab tazas de variiss Sorbetes de llet; Baranja, avellana, amés de las leguotas líquidas, que ya se-  
 crearán la vista, y mes al gust à tenerme, se-  
 guian otros ab azafatas de bescuits de ou, y  
 melindros per sucar, y ningunos estaban me-  
 lindrosos, si que ab ganas de agafar melin-  
 dros, y bescuits de ou, y dret a la boca; mecat-  
 los ab los Sorbetes, y los líquuts, los primeros ab  
 culleretas, no vent cosa de beurels desdeb vant,  
 per no eisirne glatsats de massas, que hauriam  
 incomodat prou, y ab tanta fectis a la boca,  
 trauen hora un fort dolor de capal, quel fos  
 gemegar, tanta capita de criats servi primer  
 lo beure a las Semyoras ab totas estas gotori-  
 nas en azafatas; servintlas despues las espiras  
 de cacolate en mustalinas, sobre las bandolegas  
 de Harol, caminant los criats, com si foren  
 Saperuts, y mes servt llargas las bandolegas, y  
 ben ocupadas de bollos, rouscos; ensiarnadas, y  
 demes fulveinas, suantti la Camarera etc

### 3 Liberalism, capitalism and feeding the city (1821-1966)



The 19th century was the century when the liberal states were formed. Spain's first constitution dates from 1812, but the temporary restorations of absolutism brought with them a capitalist liberalisation in fits and starts. The State tended to centralise resources and to absorb the municipal mechanisms of regulation, control and subsidy of food supplies, but the new regulations did not achieve affordable prices nor living conditions that were acceptable for the constantly growing working class of Barcelona. The City Council had to tackle situations that were totally unique within the Spanish context.

Over the course of the 19th century, and above all in the 20th century, municipal initiatives attempted to attenuate the effects of the industrial crises by promoting public works and recovering the control of food prices in the newly-built covered markets. They also drove the development of public health and safety infrastructures for foods and paid specific attention to the child population.

Olives stall at La Boqueria market.  
Josep Domínguez, 1929-1932. AFB

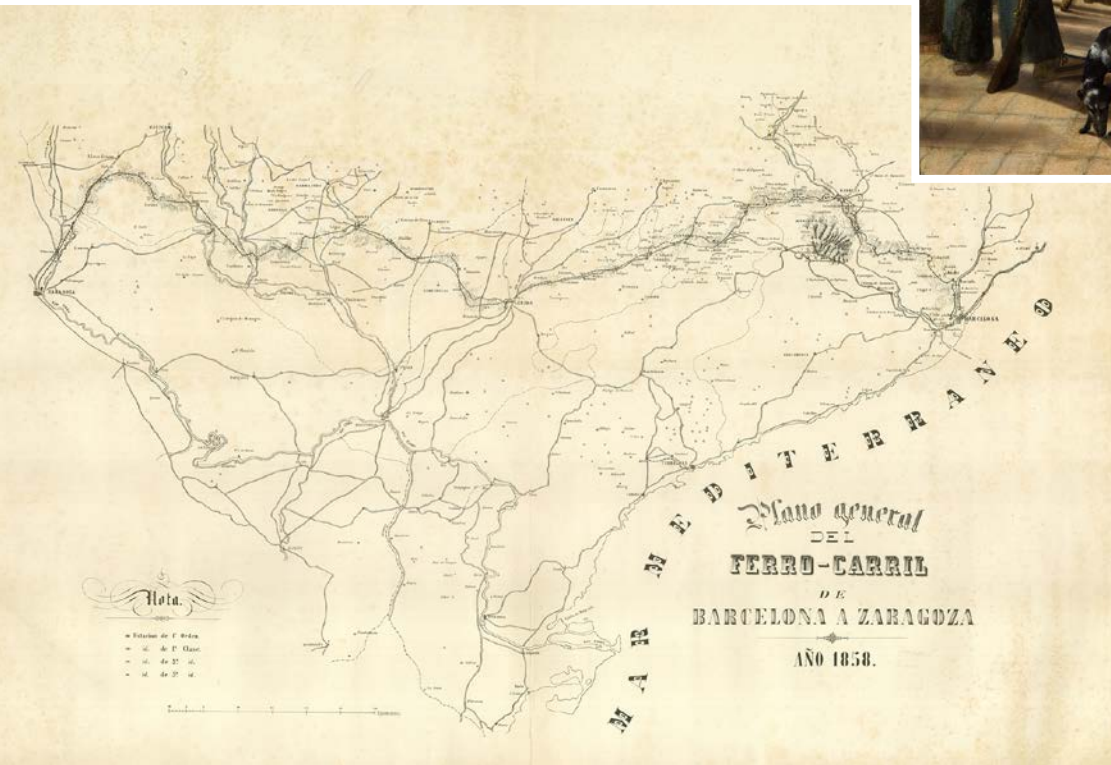


### 3.1 MUNICIPAL ACTION UNDER LIBERALISATION AND STATE REGULATION

#### The supply of wheat, from boat to train

For centuries, Barcelona had resolved its wheat shortages by sea, but in 1820, and for nearly half a century, the Spanish Government banned imports of cereals. The city went on to depend on wheat and flour from inland Spain, but because the inefficiency of overland transport made them much more expensive, this incentivised the construction of cross-country railway lines. The network reached its maximum expansion in 1895, when the company MZA's new Valladolid-Ariza line connected with the line running from Madrid to Zaragoza and Barcelona, thus opening up a direct route between the city and the wheat plains of the Duero region.

General map of the Barcelona-Zaragoza Railway, 1858. AHCB



↑ Barcelona. View of the city in flames, representing the 1835 fires. Print from the book by Ferran Patxot: *Las ruinas de mi convento*. Imp. Luis Tasso, 1835-1851. AHCB



← *La Patuleia*. Painting representing the popular riots of 5 August 1835. Antoni Ferran i Satayol, 1835-1845. MUHBA

#### “Bread and work!”, the precarious nature of the working-class condition

Barcelona was the only industrial city in the whole of Spain. Women, men and children worked there, and to buy food the working class depended on very meagre wages. Unemployment and shortages caused riots such as the so-called *bullangues* of 1835, when monasteries and convents were burned down, as was the Bonaplata factory, the first to introduce the steam engine, which the workers feared would leave them jobless. In the 1855 general strike, workers would chant the slogan “Bread and work!”. To alleviate the crises, the municipality promoted public works, with the opening of the urban axis along Ferran-Jaume I-Princesa, the construction of covered markets, the demolishing of the city walls and, subsequently, the new building works in the Eixample.

## The City Council takes the initiative again: the markets

The burning of the monasteries of 1835 and Mendizábal's disentanglement had generated a reserve of space that was used to open up city squares and markets. The construction of La Boqueria market began in 1840 on the plot of the burned monastery of Sant Josep, followed by the market of Santa Caterina on the plot of that of the Dominicans in 1844. The municipal council thus recovered its role in food regulation and, at the same time, thanks to the renting out of market stalls, it provided itself with an income source that did not depend on the state. The process continued, after the demolition of the walls and of the Ciutadella, with the new iron architecture. In the 1870s, the municipality tasked the company La Maquinista with building the markets of El Born and Sant Antoni, and later those of the Eixample were built.



↑ View of the cloister of the Convent of Santa Caterina. M. Redón, 1800-1844. AHCB

↗ Map of Barcelona (project for reform with markets). Emili Cabañes / Joan Abril, 1880. AHCB

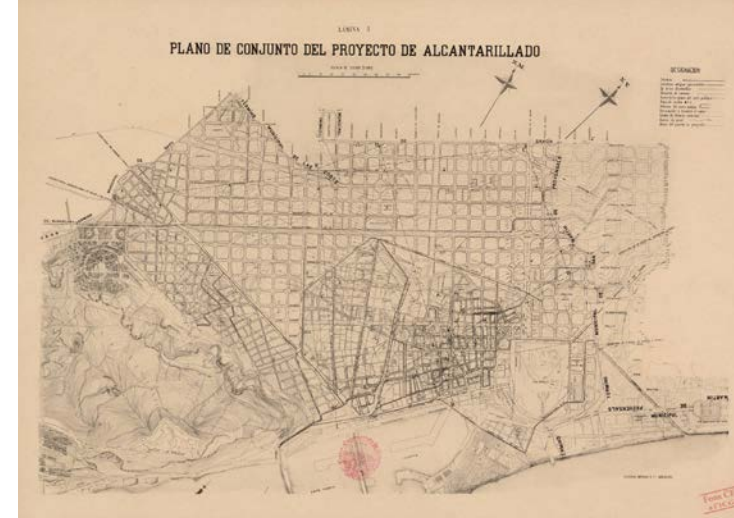
→ Interior of the El Born market. Josep Domínguez, 1932. AFB

Face of the clock at La Boqueria market, 1907. MUHBA



## Barcelona, centre of the hygienist debate

The urban conditions at the dawn of industrialisation stimulated studies on environmental insalubrity and the precarious nature of working-class life, especially tough for women. The specialists highlighted the urgent need to secure sufficient food free of adulterations, cleaner air, and improvements to housing and factories in what was an extremely overcrowded city. The early hygienists, such as Pere Felip Monlau, Joaquim Font Mosella and Joan Giné i Partagàs, were joined by Ildefons Cerdà, in 1859, with his project for a new city or extension, conceived to regenerate the urban habitat for the benefit of all the inhabitants. Towards the end of the century, Pere Garcia Faria turned to tackle the issue of wastewater and sewage.



“The workers and their families consume bread and wine of low quality; in vegetables they have the basis of their most common diet; and of the animal kingdom they barely know more substances than cod, soused fish and bacon.”

Pere Felip Monlau, *¿Qué medidas higiénicas puede dictar el Gobierno a favor de las clases obreras?*, Barcelona, Imprenta Politécnica de Tomás Gorchs, 1856

“The quantity in the diet of women should be a fifth less than the amount that is recommended for men.”

Joan Giné i Partagàs, *Curso elemental de higiene privada y pública* vol. IV, 1872

“When explaining food expenditures, we have referred firstly to those of eating in practice, in other words the usual, ordinary eating that is common among Barcelona’s working class, and afterwards [...] we propose the expenditure that would be required by theoretical eating, as science advises it should be in order for the body to be able to recover on a daily basis from the efforts exerted that working life ceaselessly demands.”

Ildefons Cerdà, “*Monografía estadística de la clase obrera de Barcelona en 1856*”, dins de *Teoría general de la urbanización y aplicación de sus principios y doctrinas al Ensanche de Barcelona*, Madrid, Imprenta española, 1867, tom II

↑ Project for the Drainage of the Subsoil of Barcelona. Pere Garcia Faria, 1891. FCEC ICGC

→ *The Hygiene Academy of Catalonia effectively recommends to all citizens the imperious need to kill flies.* Lluís Moragas Pomar, 1914. AHCB

**LA ACADEMIA DE HIGIENE DE CATALUÑA**

**RECOMIENDA EFICAZMENTE A TODOS LA NECESIDAD IMPERIOSA DE DESTRUIR LAS MOSCAS, PUES ESTÁ PLENAMENTE DEMOSTRADO QUE TRASMITEN Y PROPAGAN POR TODAS PARTES ENFERMEDADES TAN GRAVES COMO EL COLERA, EL TIFUS, LA DIARREA INFANTIL, LA TISIS, LA DISENTERIA, LA VIRUELA, ETC. ETC.**

PROCURAR POR TODOS LOS MEDIOS QUE LAS MOSCAS NO PENETREN EN LAS HABITACIONES Y DESTRUIR A CUANTAS HAYAN ENTRADO EN ELLAS ES LA PARTE MENOS IMPORTANTE DE ESA LUCHA CON SERLO MUCHO. LA MAS TRASCENDENTAL Y DE MEJORES RESULTADOS ES LA DE EVITAR SU REPRODUCCION Y ESO SE CONSIGUE LIMPIANDO TODOS LOS RINCONES DE LAS CASAS QUE ES EL SITIO DONDE ANIDAN.

ARROJAR LAS BASURAS A LA CALLE ES FOMENTAR EL CRIADERO DE MOSCAS QUE DESPUES INVADEN LAS CASAS.

DONDE HAY LIMPIEZA NO HAY MOSCAS. DONDE NO HAY MOSCAS NO FALTA LA SALUD.

LAS MOSCAS VOLANDO RECORREN DISTANCIAS MAYORES DE UN KILOMETRO.

EN LA COCINA. EN LA DESPENSA. EN LAS TIENDAS EN LOS MERCADOS. EN TODAS PARTES DEBEN PROTEGERSE LOS ALIMENTOS Y BEBIDAS PUES AL POSARSE SOBRE ELLOS LAS MOSCAS DEPOSITAN LOS MICROBIOS QUE HAN RECOGIDO CON SUS PELUDAS PATAS DEL CUERPO DE LOS ENFERMOS Y DE LOS SITIOS INFECTOS.

LIMPIENSE A LO MENOS UNA VEZ POR SEMANA. LAS CUADRAS Y CORRALES SACANDO DE ELLOS EL ESTIERCOL Y REGADO EL SUELO Y LAS PAREDES CON AGUA DE CAL. PONGANSE LOS ESTIERCOLES EN LUGARES CERRADOS, PARA QUE EN ELLOS NO PENETREN LAS MOSCAS Y A SER POSIBLE FUERA DE LOS SITIOS POBLADOS REGANDOLOS CON AGUA DE CAL. SULFATO DE COBRE, ETC.

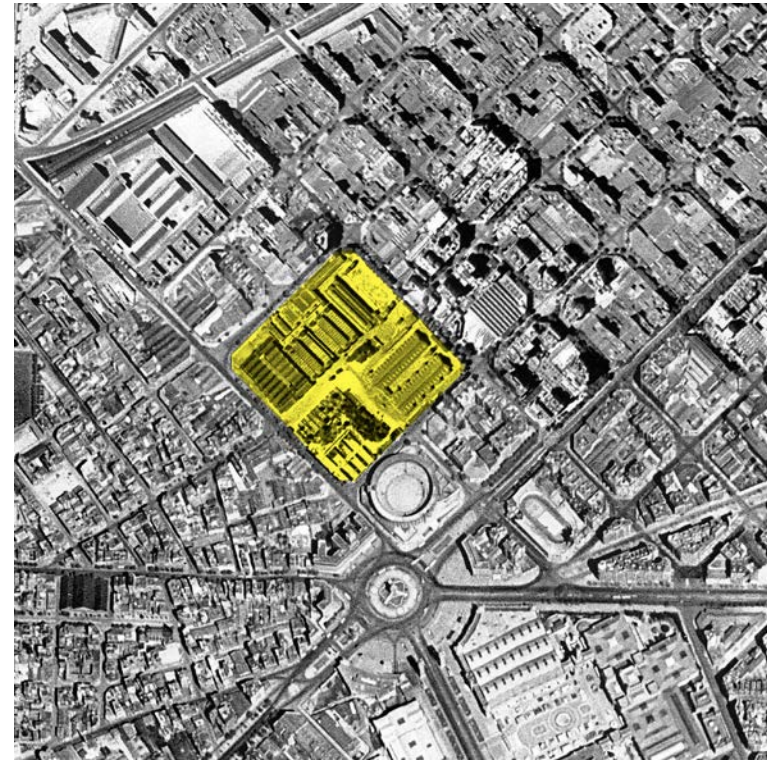
**HAY QUE DESTRUIR LAS MOSCAS POR TODOS LOS MEDIOS ADECUADOS.**

El Excmo. Ayuntamiento de Barcelona acordó la impresión del presente cartel sanitario

TIP. P. CASO UNIVERSIDAD IS7-BARCELONA

## Municipal modernisation of public health and safety

Dr Jaume Ferran's success with his vaccine against cholera led to Barcelona City Council entrusting him, in 1886, with the creation of the Municipal Microbiology Laboratory for Infectious Diseases. Subsequently, under the direction of Ramon Turró and now with the name Municipal Laboratory, it also took charge of analysing water and foodstuffs. Also in 1886, land was acquired for the new abattoir, designed based on more recent European models and inaugurated five years later. And, in 1899, as a result of the aggregation of Barcelona with other municipalities on the plain, the new Municipal Veterinary Corps was founded for inspecting markets, dairies, food shops, and hostleries. The Barcelona model inspired the first Spanish food inspection code which was passed in 1904.



**The Abattoir collection** The modernisation of food inspection had a reference point at the Abattoir. His ambition for a model new facility led municipal architect, Antoni Rovira, to visit Milan, Naples, and several French cities. The complex, which opened in 1891, occupied an enormous street block bordered by the streets of Aragó, Tarragona, Diputació and Vilamarí.

With their laboratories right next to the slaughter lines, the municipal veterinarians started up a very unique teratology and devices collection, continued following the abattoir's move to Mercabarna in 1979.

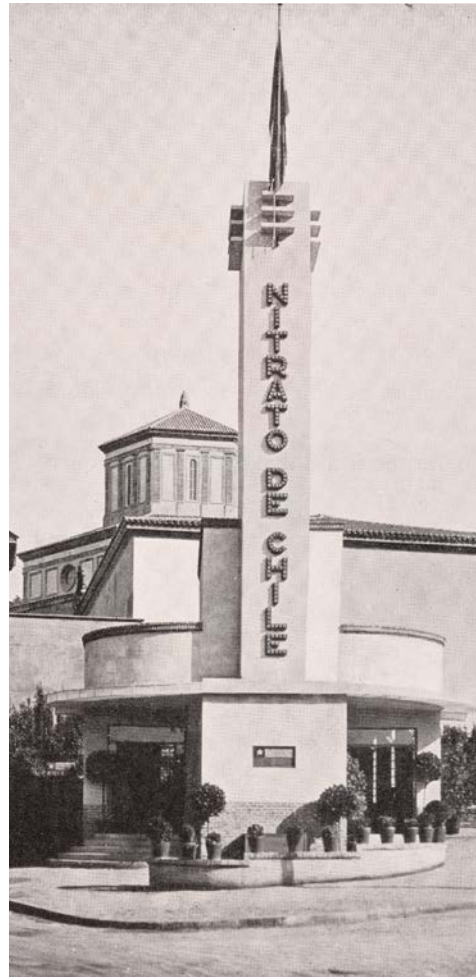
Changes in the meat sector led to the closure of the Abattoir in 2020, and the management boards of the Food Inspection Service and of Mercabarna agreed to incorporate the entire collection into the MUHBA, which also houses collections from other services such the Municipal Institute of Education.

↑ Aerial photo from 1956-1957 with indication of the location of the Abattoir site. ICGC

← Municipal Laboratory. Josep Sagarra and Pablo Luis Torrents, 1929-1933. AFB

## Research into food and health

In the early 20th century, Barcelona was already an influential centre in biomedical, pharmacological, and phytosanitary research. In 1911, the Provincial Council established, at the site of the former Batlló Factory, the Higher School of Agriculture in order to modernise animal-rearing, crop-growing using chemical fertilisers and phytosanitary treatments, and the food industry. In 1920, the *Mancomunitat* of Catalonia founded the Institute of Physiology, related with the Faculty of Medicine and the Municipal Laboratory, which studied malnutrition and the diseases associated with it. In this way, Barcelona consolidated a scientific, technical and industrial trajectory in food and health that has continued up to today.



### Chemistry for agricultural growth

The major boom in demand for food and the ups and downs of the worldwide market spurred interest in agricultural research and in the manufacture of fertilisers and phytosanitary preparations when the long-term effects of some substances were still unknown. In the Barcelona area, the growth in chemicals at the service of agriculture had its maximum exponent in the Sociedad Anónima Cros, a company founded in 1904 based on a solid industrial trajectory in the 19th century. It produced fertilisers and its main factory was in Badalona.

The *Nitrato de Chile* (Chilean Nitrate of Soda) pavilion in an advertising leaflet published during the Barcelona International Exposition, 1929. The most innovative product with regard to pesticides was lead arsenate, but the most publicised was Chilean Nitrate of Soda, a fertiliser that saw very widespread use towards the 1920s. Anuari d'Atracció de Forasters 1929-1930. AHCB

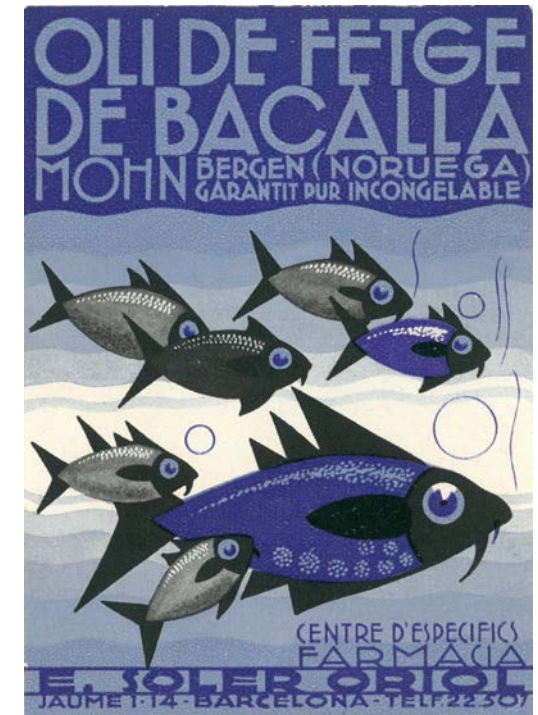


### Pharmaceuticals for alleviating malnutrition

The dietary deficiencies of a part of the population created a popular market of supposed solutions for treating physical debilitation. Pharmaceutical laboratories and food manufacturers developed formulas at the frontier between food and medicine, for example tonics based on animal blood and organ extracts, vitamins and artificial milks. Conversely, there were foods presented as pharmaceutical remedies that went on to become for general consumption, such as the dietary products of Santiveri (1893) and Danone yogurt (1919).

↑ Welfare document with medical certificate for the supply of food products, late 19th century. Sant Martí de Provençals Town Council. AMDSM

→ Cod liver oil label, 1930. FCF-CCFC



## The return of hunger

In the first half of the 20th century, the malnutrition of the working-class masses worsened with the warring conflicts. The First World War (1914-1918) saw food and coal prices soar. Barcelona City Council and the civil governor decreed set prices, but the traders did not accept them. On 10 January 1918, popular discontent erupted with a women-led wages riot that lasted for two weeks. The shortages were also dramatic in the Spanish Civil War (1936-1939), despite the regulating efforts of the Catalan Government and Barcelona City Council. The post-war period under Franco was no better, since rationing was prolonged until 1952, in the midst of the generalised fraud of the Straperlo years.



↑ Dining room at the Casa de la Misericordia (Almshouse), Adolf Mas, 1909. AFB/AM

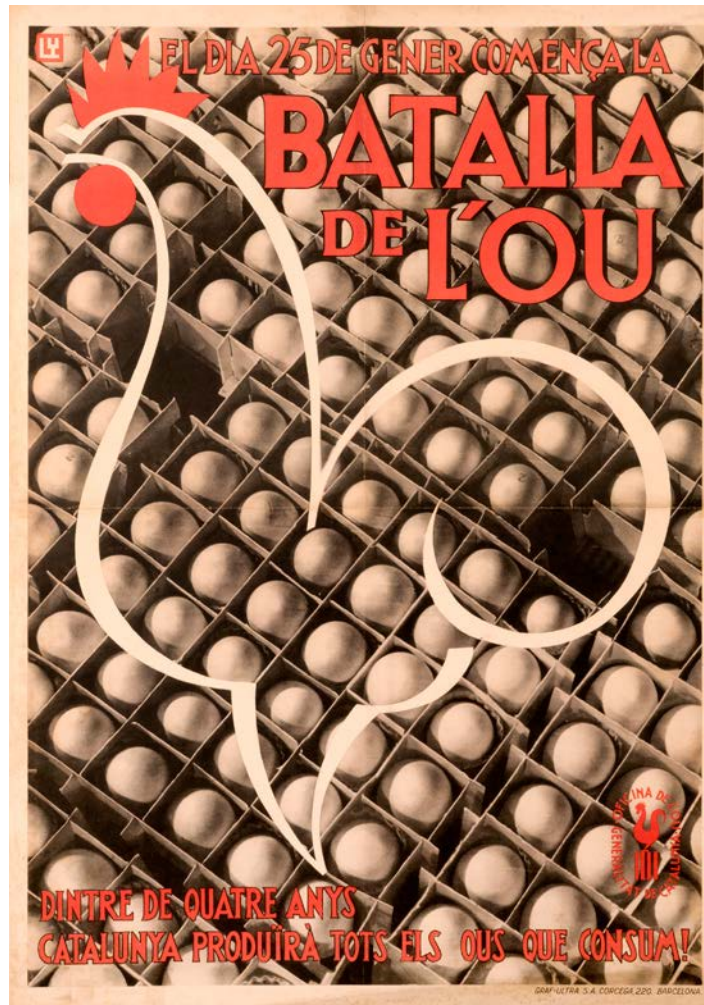
→ Ration coupons issued by the Barcelona City Council and the Government of Catalonia during the Civil War; “Single Dish” coupons from the Provincial Charity Board. AHCB

Ajuntament de Barcelona = Secció de Proveïments = 193

Correspon al Carnet Familiar núm. \_\_\_\_\_ per \_\_\_\_\_ estadants, eslès a favor \_\_\_\_\_ Die \_\_\_\_\_

Botiga proveïdora: Carrer \_\_\_\_\_

Racionament n.º 28 UNA RACIÓ de sucre	Racionament n.º 27 UNA RACIÓ de sucre	Racionament n.º 26 UNA RACIÓ de sucre
Racionament n.º 25 UNA RACIÓ de sucre	Racionament n.º 24 UNA RACIÓ de sucre	Racionament n.º 23 UNA RACIÓ de sucre
Racionament n.º 22 UNA RACIÓ de sucre	Racionament n.º 21 UNA RACIÓ de sucre	Racionament n.º 20 UNA RACIÓ de sucre



← The “Battle of the Egg”, Fritz Lewy, 1937. In the month of May 1937, the Government of Catalonia promoted a campaign known as the “Battle of the Egg” to increase egg production and thus tackle the food shortage caused by the Spanish Civil War. The so-called Egg Office had to supply, “for the year 1937, 100 hens to every farming home and 6 hens to each working-class home”. Despite the efforts and planning, this initiative to convert the citizens of Catalonia into small-scale poultry farmers was not quite successful and fell a long way short of the quantity of eggs that the country needed. BPR

↓ Post-war ration book, 1952. AHCB



GENERALITAT DE CATALUNYA  
CONSELLERIA DE PROVEÏMENTS

VAL per les Racions de CARN

Valador per al mes de GENER

Corresponent al Carnet n.º 21187

Establiment designat per a la compra Carrer \_\_\_\_\_ n.º \_\_\_\_\_

Gen. 16	Gen. 15	Gen. 14	Gen. 13	Gen. 12	Gen. 11	Gen. 10	Gen. 9	Gen. 8	Gen. 7	Gen. 6	Gen. 5	Gen. 4	Gen. 3	Gen. 2	Gen. 1
Gen. 17	Gen. 18	Gen. 19	Gen. 20	Gen. 21	Gen. 22	Gen. 23	Gen. 24	Gen. 25	Gen. 26	Gen. 27	Gen. 28	Gen. 29	Gen. 30	Gen. 31	

PLATO ÚNICO 0'50 Ptas. Serie 1

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PLATO ÚNICO 0'50 Ptas. Serie 1



## The structuring of the urban food supply

In the municipal territory unified with the aggregations of 1897, there were a dozen markets that played a fundamental role in supplying the popular neighbourhoods. In some, above all if there was no market, workers' consumer cooperatives emerged that had their own suppliers and were reference points in community life. As for wholesale supply, an initial concentration was built up: on the left of the Eixample was the Abattoir since 1891, El Born was converted into the central fruit and vegetable market in 1921 and the poultry and fish were located at the Galeria de Màquines, on Carrer Wellington, where in 1953 the Central Fish Market was built.

Aspect of Carrer Comerç and El Born on market day. Josep Maria Marquès, 1934. AFB

## 3.2 NOURISHING AN INDUSTRIAL CITY

### Rationalising weights and measures

The traditional system of weights and measures complicated commercial activity and the detection of food fraud, until a municipal proclamation of 1871 converted Barcelona into the first city in Spain that made use of the decimal metric system compulsory. This was not easy to achieve. The new system, based on measurement of the meridian between Dunkirk and Barcelona, had been promoted by the National Assembly born out of the French Revolution, and the Spanish Bourbon monarchy ignored it until 1849. Subsequently many years were still needed to implement it in everyday life.

Set of measuring cups, decimal system. Barcelona Municipal Education Institute, first half of the 20th century. MUHBA



## Working-class diet and middle-class diet

Until well into the 20th century, the working-class diet was based on legumes, vegetables, cod, herrings, and bacon; simple dishes in the form of soups and stews, the occasional egg, and very little fresh meat such as, for example, offal in lunchtime stews, prepared with bones, lard, vegetables and potatoes or rice. Some dishes, such as *escudella i carn d'olla* (meat and vegetable stew), were very widely eaten but the more money people had, the more and better the meat that they ate. The quality of wine and of bread, whether white or brown, also depended on people's pockets. The consumption of fine meats and poultry was reserved for well-off families, as were appetizers, hors d'oeuvres, casseroles, stews and French cuisine dishes. Such fine tables were never lacking in fresh fish, eggs, or butter, and sweets were abundant.



← Cod sign. MM

↓ Granja Avicola de Sn. Luis. Alexandre de Riquer Inglada, 1896. MNAC

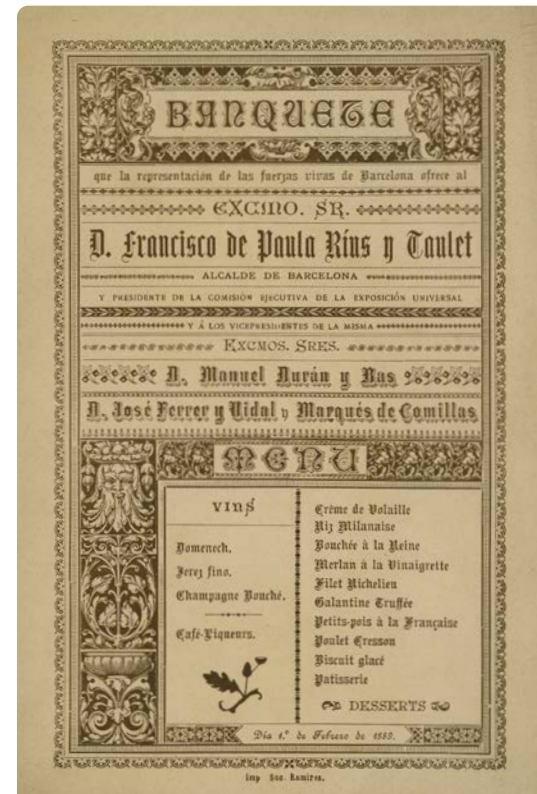
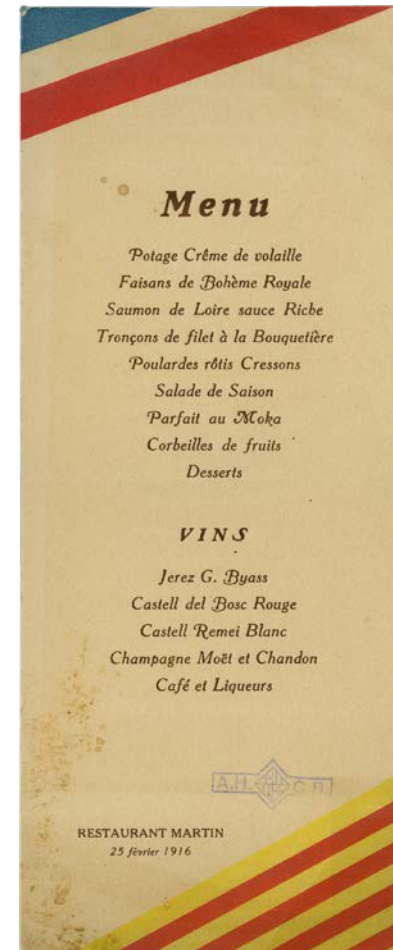


## Eating out

Eating houses and taverns, of a secular tradition, fed travellers, labourers and skilled workers alike. Pickles, fried and oven-baked cod, legumes with bacon, *capipota* (ox head and feet), rice dishes and baked macaroni were all common fare. The most popular were the *fondes de sisos* (sixes inns), thus named due to their set menu price of six quartos, and where waiters called out the dishes in their own typical culinary slang. In the mid-19th century, restaurants arrived with Italian entrepreneurs, followed by the French. For a long time these were the reference points of haute cuisine in Barcelona, combining above all French and Catalan cuisine. In the mid-20th century, the inns and taverns fell into decline with the expanding range of restaurants and the appearance of American-style snack bars and soon the first self-service cafe opened in the Plaça Reial.

← Menú of the Restaurant Martín, 1916. AHCB

↓ Banquete que la representación de las fuerzas vivas de Barcelona ofrece al exmo. Sr. D. Francisco de Paula Rius y Taulet [...], 1889. AHCB





## The drama of child nutrition

In the early 20th century, the child mortality rate led to campaigns focusing on diet, with municipal initiatives such as the *gotes de llet* (milk depots) and, during the Second Republic, the Catalan Government promoted the Pro-Children Stamp to fund nurseries and fight against paediatric tuberculosis. In the post-war era, the municipal educational tradition persisted despite repression by the Franco regime. If, during the war, the City Council's schools had never been short of a bowl of soup, one of the first actions of the Municipal Education Institute (founded in 1953) took was to create school dining rooms to supplement the dietary deficiencies of many families.



↙ Teapot from the Barcelona Municipal Education Institute, mid-20th century. MUHBA

→ *Sobre la alimentación de los niños y cuidados que deben aplicárseles*, advertisement. 1930. AHCB

↓ Hospital for poor children by doctor Vidal Solares. Sterilised milk service. Adolf Mas Ginestà, 1907. AFB/AM



### Mother's milk against child mortality

The high child mortality rate caused special concern for maternity and nursing mothers, giving rise to campaigns to promote breastfeeding by mothers and the founding of the *Casa Municipal de Lactància* (Municipal Home for Nursing Mothers) which opened its doors in 1913. It was designed to promote maternal breastfeeding and wet nursing and, where applicable, to guarantee the quality of bottle-feeding. The same period saw the reform of the Provincial Home for Mothers and Foundlings. It depended on Barcelona's Provincial Council and had been transferred to Les Corts.

## The impact of milk consumption

In the mid-19th century, Barcelona had fifteen dairies and some stalls selling milk from nearby farms. Adults did not drink milk, but this soon changed because of the praise that doctors gave to its nutritional value. In 1900, in addition to an indeterminate number of goats, there were some 300 dairies and around 1,400 cows, which by 1919 had become 7,000. Although for hygiene reasons they were prohibited in the old centre, the dairies continued to spread across the municipality, including the Eixample. However, with the improvements in transport and conservation, the milk increasingly originated from the Vallès, Baix Llobregat, Maresme and other districts giving rise to the expansion of the dairy industry. The 1960s marked a turning point with the formation of a dairy products market across the whole of Spain and the announced prohibition of urban dairies from 1971 onwards. The last one closed in 1984 in Gràcia.



**Danone and Cacaolat: food innovation in El Raval** In 1919, Isaac Carasso, from a family originating from Thessaloniki (Greece), set up, at his laboratory on Carrer dels Àngels, a yogurt production operation, based on a Bulgarian recipe and with the backing of the medical community. Yogurts were already being produced in the city, but Carasso's Danone was the first industrial-production yogurt in the world. Twelve years later, Joan Viader, from a family from Cardedeu (Barcelona), tasted a delicious drink made with cacao while visiting Hungary. He researched the product at his café on Carrer Xuclà and presented it at the 1933 Trade Fair under the name of Cacaolat. It was the world's first industrialised chocolate milk shake.

Danone advertisement. MM

## From grocer's shops to supermarkets

Grocer's shops changed their appearance in the mid-19th century when they expanded around the Eixample with the name of *colmados*. They were supplied by the new meat, tinning, distilling and dairy industries, without abandoning colonial or foreign products. A century later, competition from supermarkets led many of them to conversion. The first supermarket in Barcelona was opened in 1958 by the National Supplies and Transports Commissariat on Passatge Domingo, as a public model for stimulating private capital to sell packaged and — new modality— frozen foods: meat was the main goal. Also ready to begin trading were Caprabo, at Camp de l'Arpa, and Superma, at La Verneda, which in 1959 were pioneers in the fast expansion of supermarkets.

→ The first private supermarket in Catalonia, located at Carrer Sant Antoni Maria Claret, 318. 1959. Arxiu Històric Caprabo



Grocer's shop products. MM



# 4 Agroindustry, commercial networks, and complex regulations (1967-21st century)



With its Stabilisation Plan of 1959, Spain had started to converge with the reconstruction of Europe after the Second World War. The agri-food industry multiplied the products available at affordable prices and Barcelona experienced an ambiguous commercial transformation. The survival of the public indoor markets, despite the growth of supermarkets and suburban commercial shopping centres, led to the City Council's decision to modernise them: this policy in the neighbourhoods, combined with the so-called “Areas of New Centrality”, held suburban shopping in check.

In parallel, food regulation took on greater complexity with the incorporation of the regulations of the Government of Catalonia and of the European Union from the 1980s onwards. The impact was decisive when European food products went into free circulation. In the 21st century, digital management, new sales agents, and growing interest in local and seasonal produce have diversified even further the products available and forms of distribution, from the home delivery services of global firms to a more varied neighbourhood shopping offering.

View of Mercabarna. A. Bofill.  
Mercabarna

## 4.1 CHANGES OF SCALE IN PRODUCTION AND SUPPLY

### The expansion of agroindustry

The 1960s saw a boom in intensive livestock practices on farms, for example the poultry farms, and the expansion of the food industry with new products and new techniques for preservation, such as freezing. Equipping households with refrigerators and freezers was one of the requirements for this agroindustry which, as it has evolved on a global scale, has had a destructive impact in many areas. Half a century later, the technical and political context has changed and interest is now spreading in more sustainable forms of food production, favoured by digital management and capable of also incorporating metropolitan agricultural spaces, such as the Baix Llobregat Agricultural Park.



### The falling price of animal proteins

Before the 1960s, cod was an affordable food for poorer families whereas chicken was expensive and out of their reach. This relationship was inverted when overfishing made cod more expensive, leading it to become a more exclusive product. In contrast, industrial chicken-rearing permitted – albeit with an extremely high environmental cost – such a spectacular price reduction that chicken became a protein source within reach of any pocket.

↑ Gallina Blanca Farm in Vilanova i la Geltrú, 1963. ANC

→ Poultry farm. Eduardo Abad, 2005. EFE (EPA)



La Boqueria Market. Pere Vivas



### Barcelona's singularity: survival of its indoor markets

The dozen indoor markets that existed in the year 1900 grew to 39 by the end of the 20th century and 41 today. Although supermarkets spread from the 1960s, the process was slower in Barcelona than in other cities on the continent, and its markets, although somewhat neglected, continued to play a prominent role. A few new ones even opened in peripheral areas. This survival led, in the 1980s, to the municipal council's food authority opting to restore them, modernise them, and strengthen their role in the neighbourhoods. Today they form a social heritage that is very much alive within the cultural landscape of the city, and one that is unique in Europe.



Núria (closed) 1966  
 Ciutat Meridiana 1968  
 2001

Vall d'Hebron  
 Teixonera 1969  
 2019

Canyelles 1987

Montserrat 1960  
 in progress 2021

Sarrià 1911  
 2007

Les Tres Torres 1960

Sant Gervasi 1913/1968  
 2002

Carmel 1969

Horta 1951

Guineueta 1965  
 2013

La Trinitat 1977  
 2001

Les Corts 1961  
 2008

Galvany 1927

La Llibertat 1888  
 2009

Lesseps 1974  
 1999

L'Estrella 1957

Guinardó 1954  
 2014

Felip II (La Sagrera) 1966  
 2002

Sant Andreu 1914  
 2021

Bon Pastor 1961  
 2019

Sants 1913  
 2014

Ninot 1933  
 2015

L'Abaceria Central 1892  
 in progress 2021

Sagrada Família 1993

Provençals 1974  
 2013

Hostafrancs 1888  
 2003

La Concepció 1888  
 1998

Sagrada Família 1993

Sant Martí 1966  
 2014

La Marina 1973  
 2003

Sant Antoni 1882  
 2018

Santa Caterina (Isabel II) 1848  
 2005

Fort Pienc 2003

El Clot 1889  
 1995

Besòs 1968

Sant Josep (Boqueria) 1840/1914  
 2001

Born 1876  
 2013

Poblenou (La Unió) 1889  
 2005

La Barceloneta 1884  
 2007

Market  
 Opening year  
 Refurbished in

## Mercabarna, the public driving force of the food system

The transformations in the food supply system over the last half-century have had a common driving force in municipally-managed wholesale supplies. In 1967, Mercabarna was founded: a wholesale hub controlled by a public company, with Barcelona City Council holding a majority share, followed by Mercasa, the Spanish organisation that groups together all the wholesale centres created at the time. In 1971, the transfer of the central markets to Mercabarna commenced: firstly, El Born and later the Abattoir and the Fish Market. Mercabarna has become one of the main fresh produce markets in Europe, conceived as a Mediterranean food hub that connects global and local networks, promotes the Barcelona food cluster, and is the headquarters of the Biomarket, Spain's first wholesale organic foods market.

↓ Night view of Mercabarna.  
Pérez de Rozas, 1971. AFB

→ Mercabarna fish market.  
Eduard Olivella, c. 1990. AFB



## 4.2 TRANSFORMATIONS IN FOOD SUPPLY IN THE EARLY 21ST CENTURY

Computerised management and long-distance links, on the one hand, and interest in local produce, on the other, have diversified food supply in the 21st century. There has been a revival at the neighbourhood scale, with the adaptation of distribution chains to a less concentrated structure. New networks of small-scale shops, often franchises and run by recently-immigrated groups with a strong mercantile tradition, especially those of Pakistani origin, have become consolidated, while interest has increased in homemade food and organic products sold through new shops and small weekly markets. However, at the same time, there has been growth in the supply of food via home deliveries by global companies, often with a very high social, environmental, and urban cost.

# PRESENT CHALLENGES

**Feeding the city has always posed a major challenge**, that of guaranteeing access to the most basic component of sustaining life in order to prevent deficiencies and conflicts that compromise health and social harmony. Food health in the city has always had two components. **Quantity**: ensuring the supply of foods and that these are accessible for everyone. And **quality**: ensuring food safety to safeguard the health of citizens, preventing intoxication and infectious outbreaks.

**Feeding the city has always been a political matter.** The general population and institutions of Barcelona have claimed and exercised the right to intervene politically to guarantee a food supply for the city that is adequate in quantity and quality.

**The territorial reach of the food footprint of Barcelona** has expanded over the course of the centuries due to population increase and changes in forms of crop-growing, animal-rearing, transport and energy sources. Municipal food policies have also varied with social, technical, economic and political transformations. But in one way or another, the municipal institution and citizens' initiatives have maintained an active role and have accumulated a collective inheritance.

**In the 21st century, the city is facing new food security challenges** arising from the climate emergency and the global socio-environmental crisis. To tackle these, it is demanding and exercising new forms of food sovereignty geared towards sustainability, within a fair and safe space for everyone on the Earth. Barcelona is a signatory of the Milan Urban Food Policy Pact for sustainable food, a member of the C40 Cities Network, the promoter of a new Urban Master Plan designed to protect the metropolitan green infrastructure that supplies food and ecosystem services, and it has been nominated World Sustainable Food Capital 2021.

# SUSTAINABILITY

In Roman times, Barcelona had some 5,000 inhabitants, and it bought wheat that arrived by sea and sold wine that also departed by sea. To sustain its growth, the city has expanded these supply networks as well as the extent of its food footprint. Today, Barcelona has over 1,600,000 inhabitants, while its metropolitan area exceeds 3,000,000.

**What type of food sovereignty is necessary and possible for a sustainable food supply?**

**With whom should it be shared, within a new territory of agroecological supply?**

# INNOVATION

Supplying Barcelona would have been impossible without a whole series of agrarian transformations and changes in the diet of urban consumers, which intensified the uses of the land and moderated the expansion of the food footprint. Some took place in the vegetable gardens and fields situated inside the city walls, others affected the cultivation of wheat and legumes, as well as the integration of livestock. Industrialisation of crops has increased yields and brought down prices, but at the cost of

greater consumption of fossil fuels and the deterioration of soils and of terrestrial and maritime ecosystems.

**What innovations are needed now to make a sustainable agro-food model a reality?**

**In what way can supply be expanded while respecting the environment?**

# SUPPLY

Where did food arrive from? What quantity of grain and carob did a mule need to eat to transport, in one day, the energy of the cereals that could fit into its cart? In how many days would it have consumed all the grain in the cart? What role was played by the port, the steam engine or the railway network? Where does food come from today? How many trucks pass every day along the roads, bringing food from remote places? What will happen when oil starts becoming scarce?

**Will everything be resolved with the change to electric or hydrogen-powered vehicles?**

**Will more in-depth changes need to be made to the agro-food system?**

# HEALTH

For centuries, the inhabitants of the city have suffered from diseases and epidemics: poor people due to shortages, rich people due to excesses, and both poor and rich people due to a lack of proper sanitation. In the Barcelona metropolitan area, 14% of the population cannot afford a balanced diet, and malnutrition and obesity are frequent. We are suffering from new forms of contamination that affect the agro-food chain and spread through it. The COVID-19 pandemic is a reminder that *there is only one*

*health*, as the WHO says: our health and that of the environment are one and the same thing.

**What effects does what we eat have on health and how will this change over time?**

**How will we guarantee, in the 21st century, healthy nutrition for all human beings, without transgressing the planetary environmental limits that we have already reached?**

# PRODUCTION

From 1537, Barcelona's bakers were obliged to knead the dough at the municipal bakery and to sell it at set prices. Despite the liberalisation of breadmaking in 1767, the notion of a fair price was still in force in people's moral economy. The trading networks brought new products and changed our food routines. The Mediterranean diet was a popular discovery that emerged from necessity due to the rising price of meat. Industrial and globalised agro-food production has once more changed our purchasing and

consumption habits, with diets that are less healthy and more wasteful.

**What changes are emerging and do we have to promote in order to develop diets and agro-food chains that are healthier and more sustainable in the 21st century?**

**What is slow food?**

# IMPACT

Supplying the city has always projected an ecological footprint, but not necessarily a negative one. Ecologist Ramon Margalef considered that the agrarian landscape mosaics of traditional agriculture and livestock farming were integrated with the uses of the forest and helped to conserve biodiversity. Today, those landscapes are disappearing under the monocrops of industrial agriculture, separated from the industrial farms and from the abandoned forests. Global livestock farming produces some 14% of the greenhouse gas

emissions, and the entire agro-food system produces a third.

**What new agroecological transition do we have to make so that the agroecosystems that supply the city work in favour of nature and not against it?**

**What is proposed by the FAO, the European Union, Via Campesina, the International Federation of Organic Agricultural Movements (IFOAM) and other movements around the world?**



# GOVERNANCE

The urban food supply is and always has been a political matter. The food sector has always been different from every other sector, conditioned in the past and today by public regulations. With the *Consell de Cent*, between the 13th and 18th centuries, the figure of the *mostassà* or clerk of the market, the municipal markets network, the wholesale hub of Mercabarna, the collaborative networks, organic food baskets and new consumer cooperatives, over the course of time Barcelona has managed the supply, distribution and

commercialisation of food. This has left us a legacy in the form of a long repertoire of know-hows, instruments and infrastructures.

**What is the state of health of today's versions of these infrastructures?**

**How will we need to redesign them in order to develop a new food regime that is fair for everyone?**

# HEALTH AND SAFETY

The first Spanish food legislation, preceded by centuries of municipal orders, was a Royal Decree of 1908. In the 19th century, the leading causes of death were diseases linked to sanitation and food health and safety. The medical topographies of the 19th century – and the work by Cerdà, Garcia Faria and Montoliu in Barcelona – tell how hygienism worked to reduce excess mortality. Today, the COVID-19 pandemic and contamination with microplastics highlight the failures of reducing food health and safety inspection, as well

as the use of plastic wrappings and the abuse of antibiotics.

**What new ways of conceiving and managing food health and safety do we need in the 21st century?**

**In what way would it be appropriate to monitor them?**

# PROXIMITY

Although a large part of the wheat, livestock and forestry footprint has moved away from the city, pre-industrial Barcelona always maintained a part of it: in the market gardens and vineyards of the plain where the Eixample currently stands, in the orchards along the Rec Comtal irrigation canal to Montcada, and in small domestic vegetable patches. The great metabolic fracture between city and countryside opened up in the 19th century. It was a biophysical and also a sociocultural divide that distanced the city's inhabitants from the

farming community and vice versa.

**What new circular bioeconomy do we need today, in the 21st century, to heal this metabolic and symbolic fracture with the reintegration of countryside and city in new agroecological territories?**

**What new food landscapes would it be necessary to build?**

**What does zero km food really mean?**

# WASTAGE

The other face of the metabolic fracture is food wastage. Barcelona opened up its first municipal rubbish tip in 1970. Previously, nearly all domestic waste was organic. Waste was collected to produce compost. Rag-and-bone men paid for glass, paper, metal and clothing. Industrialisation, the use of plastics and the new consumerist ethos put an end to the reuse culture. Today it is calculated that, in Barcelona, a third of its five million daily meals go in the bin. For the last decade, the percentage of household waste

collected and separated has remained stagnant at 35%.

**How can we close the sociocultural and biophysical circle of organic waste once more so that it returns to the fertile ground from which it emerged?**

**Is separating waste enough to recycle it?**

## Feeding Barcelona. City, food supply and health

The Feeding Barcelona Project was initiated by the MUHBA in 2013 and has enjoyed the collaboration, at different times, of the Arxiu Històric de la Ciutat de Barcelona, Mercats de Barcelona, Mercabarna, the Museu d'Història de la Medicina de Catalunya and the municipal project Barcelona World Capital of Sustainable Food 2021.

### Research published in *Proveïr Barcelona*.

#### *El municipi i l'alimentació de la ciutat, 1329-1930, MUHBA, 2016, with the collaboration of the*

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