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**Mass catering and local agrifood
systems in Lombardy
The project Bioregione**

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The aim of the research BioRegione

The main aim of the research is to **analyze both demand and supply in public procurement** of the mass catering in Lombardy (administrative region of North Italy).

The **public procurement** of the mass catering involves a **potential demand, highly concentrated and of considerable size**.

Through a direct survey in schools, hospitals and other facilities we have tried to quantify:

- the magnitude of this demand
- focusing on the demand for organic and local products.

On the other hand we have analyzed the actual amount of the main products that compose the menu.



The development of LAS

The research analyses the Local Agrifood Systems and in particular the role of the public catering as:

- an innovative instrument for the local development
- an important opportunity for the farms.

The results are the first step of the research project Bioregione which has the aim of:

- developing approaches and tools
- to design a regional food system
- capable of economic self-sustainability

and

- to generate systemic positive effects.

Similar processes are undergoing in different areas of the world with the so-called experiences of Local Food Systems (LFS) (Feagan, 2007), according to the US definition, or Local Agrifood Systems (LAS) , which instead is the French definition (CIRAD-SAR, 1996) [in French SyAL].



Methodology – consumption analysis

The research was based, with regard to the school catering, on a **questionnaire sent to all the Municipalities of Lombardy**. In Italy, the municipalities are responsible for providing canteen service in primary schools.

The questionnaire allowed to collect a huge quantity of data, such as the number of meals provided per year, the **frequency distribution of 47 food products and their origin** (conventional, sustainable or organic agriculture). The **data sample** collected represents **72 % of the total public school systems**.

With regard to the other types of mass catering, in hospitals, kindergartens and day-care institutions for elder people, 100% of data on the number of meals provided per year were collected.



Methodology – Supply analysis

The supply analysis was carried out by comparing the data of the national census of agriculture (2011) with those of the SIARL (Agriculture Information System of the Lombardy Region). These data, collected at municipality level, allowed to know which crops are grown and how many hectares are allocated to each crop as well as which and how many animals are bred.

By using the data of the average yields, available at the provincial level, it was possible to calculate the production of crops and livestock for each municipality of the Lombardy Region.



Geographical distribution of meals in mass catering in Lombardy by type of structure

District.	School (n. of meals per year)	Hospital (n. of meals per year)	Centers for minors (n. of meals per year)	Centers for elderly (n. of meals per year)	Centers for disabled people (n. of meals per year)	Total Mass catering (n. of meals per year)
BG	6,519,819	4,863,649	5,308,664	4,940,411	658,344	22,290,887
BS	6,831,889	6,663,654	3,956,426	6,730,050	701,928	24,883,947
CO	3,858,990	2,486,295	1,215,078	4,026,318	388,901	11,975,582
CR	2,766,201	1,909,428	888,822	3,939,889	718,041	10,222,381
LC	2,595,052	1,634,554	596,166	1,852,514	258,044	6,936,329
LO	2,052,994	1,006,314	864,112	1,128,306	105,826	5,157,552
MB	7,830,588	5,410,807	1,666,037	2,827,190	342,751	18,077,374
MI	28,850,685	16,302,682	10,072,118	15,404,335	1,459,359	72,089,179
MN	2,150,601	1,977,854	1,048,315	2,917,232	227,720	8,321,722
PV	4,008,025	4,152,545	1,354,721	4,893,544	367,632	14,776,467
SO	1,378,011	1,185,732	212,436	1,156,218	108,728	4,041,125
VA	6,416,812	2,346,052	1,620,095	4,986,535	486,248	15,855,742
Tot.	75,259,669	49,939,566	28,802,990	54,802,542	5,823,521	214,628,289

Source: our direct survey



The first results

The first and fundamental result of the data collection is the quantification of the importance of the mass catering in Lombardy. As shown in previous table every year **more than 210 million of meals** are served in mass catering.

- **35%** (more than 75 million) of those are served in **schools**
- **23%** (about 50 million) in **hospitals**
- **13%** (more than 28 million) in **Centers for minors**
- **25%** (about 55 million) in **Centers for elderly people**
- **3%** (about 6 million) in **Centers for disabled people**

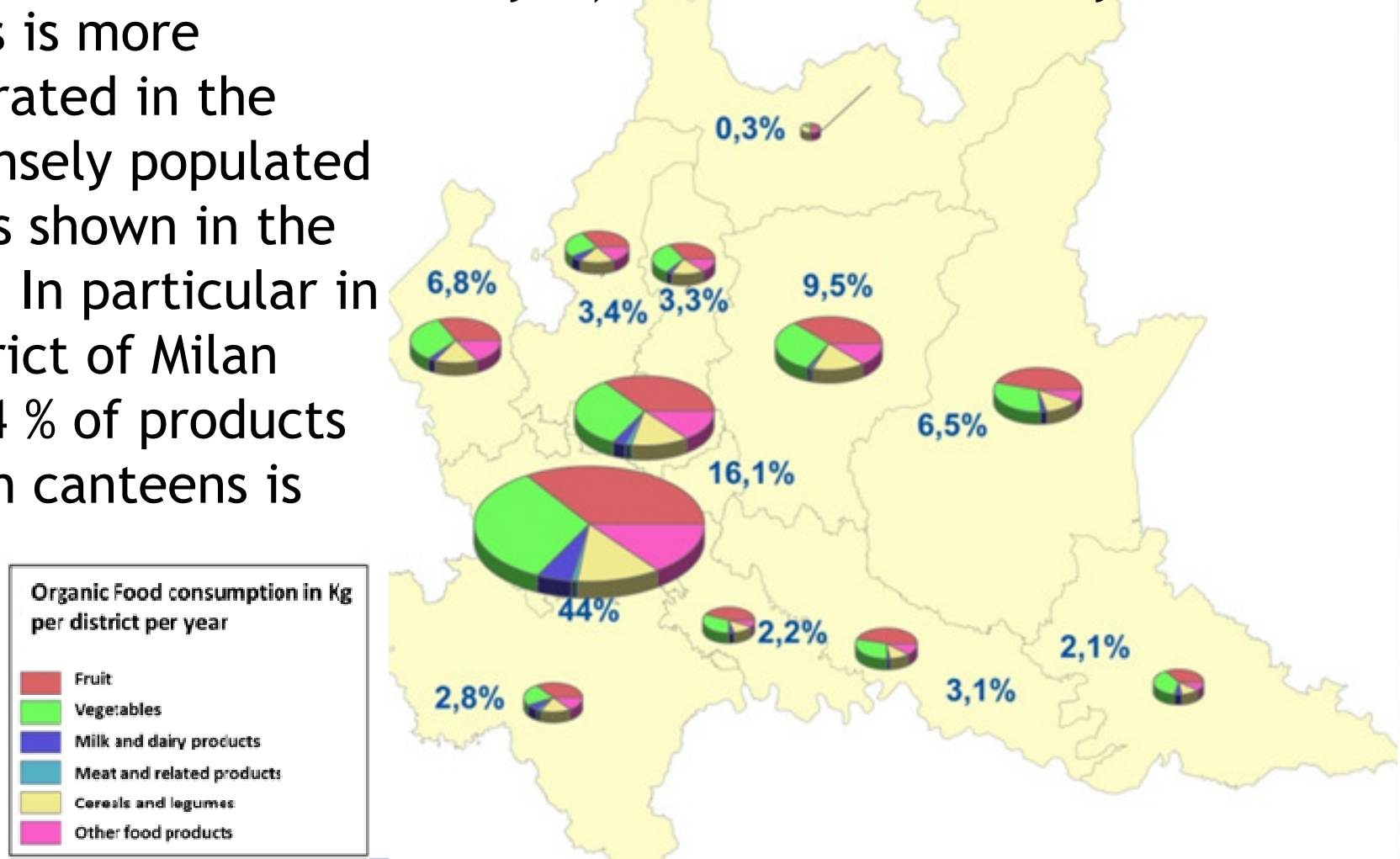
Actually, in some environments, such as hospitals or centers for elderly, the computing unit is normally the “food day” (from breakfast to dinner) and not the single meal, but in order to standardize the calculation, the food days have been transformed into number of meals.



The demand of organic products

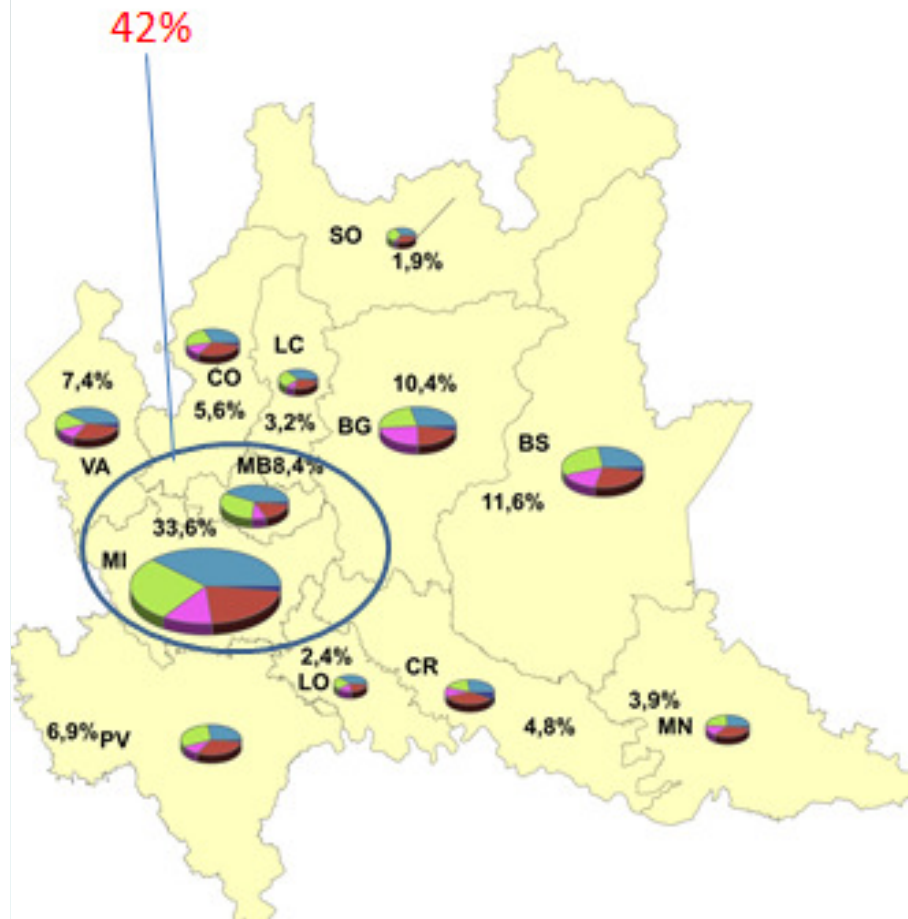
The demand for organic products is more concentrated in the most densely populated areas, as shown in the figure 1. In particular in the District of Milan about 44 % of products served in canteens is organic.

Total organic products consumed (about 1.825 ton/year). Source: our direct survey

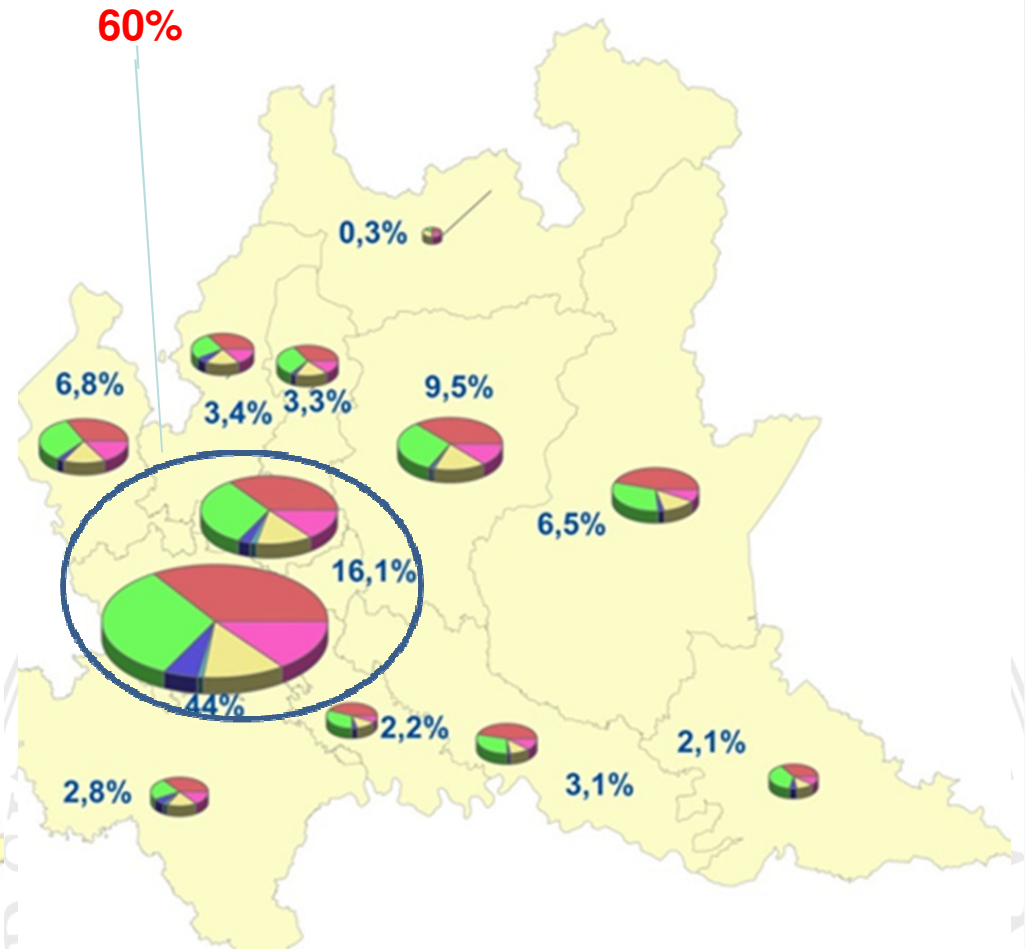


School meals and organic demand

Distribution of meals



Distribution of organic consumption



Source: our direct survey



Conclusions 1 - Can the the supply of local products meet the demand?

The demand for local products continued to increase in recent years. It is expressed in different forms: short chain products, zero-km products, local products; terms which are often used one for the other.

To prepare the about 214 million meals served annually by the mass catering in Lombardy a considerable quantity of food products are today purchased on the global market.

In parallel, the agri-food production is nowadays devoted mainly to large retailers.

The possibility that a part of this products can be retrieved on the regional market, and most importantly, on local markets can be a driving force for the development of LAS and especially a tool for rural development.



Conclusions 2 – the criticalities for the development of the LASs

The continuous improvement of the quality of procurement and of mass catering service can be realized by **operating several choices** which **altogether can ensure the achievement of this goal.**

First of all **the development of local and sustainable agri-food systems** should be fostered, by coordinating supply with demand.

To increase the percentage of local food in the providing of mass catering it is necessary to **know very well both the demand of mass catering system and the supply chain of local products.**



Conclusions 3 – possible challenges: the integration of catering services

Furthermore, the **catering service is very easily suitable to build up win-win strategies on a territorial basis**, pursuing different forms of integration:

- **horizontal integration**: small-medium sized municipalities may share call for tender documents, with the goal of making a single tender, as well as share facilities such as cooking centers, that are often underutilized,
- **vertical integration**: is it possible to realize different forms of integration in the same area, between the various sectors of the mass catering: schools, hospitals, day-care institutions for elder people in order to reduce costs and streamline the service.

The **development of the integration of services allows streamlining the environmental and economic costs**, even by checking the optimal market conditions and sharing facilities and human resources.



Conclusions 4 – possible challenges: the rationalization of the supply chains

The rationalization of the supply chains of mass catering, their qualification and improving the sustainability of the system are a significant challenge for public institutions.

The first important result to be achieved is to make possible a new ongoing relationship between the demand of the mass catering, which requires constant supplies and relevant quantities, and the local food production system.

The difficulties in satisfying the current demand can be overcome with a higher/better knowledge of territory, production (quantity, quality, spatial distribution, seasonal availability), required quality standards (food safety, etc..) with an aggregation of offer based on local and multi-product platforms and a more efficient organization of supply chains.



Thank you

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