

The background image shows a close-up of a person's hands holding a round, light-brown food patty. In the background, there is a white tray containing several more of these patties. The scene is set on a white table with blue and yellow decorative cutouts. A green pen and a black marker are also visible on the table.

# **SUSTAINABLE FOOD IN SCHOOL CANTEENS: TWO SUCCESSFUL CASE STUDIES FROM ITALY**

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Innovazione e sostenibilità nei sistemi agroalimentari

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ALBERT sas is an Italian company specialised in developing **Sustainable Food Systems**. The main fields of activity include:

❑ Providing support to public institutions in the areas of **sustainable nutrition** and **consumption education**; planning and developing **consultancy services and assessment protocols** for mass caterers and school canteens. It has provided support to Rome school canteens for the last 15 years.

❑ Planning and developing projects aimed at improving the **quality of agrifood systems** at the regional, national and international level, with special attention to the **fishery and aquaculture** sector.

# Sustainable food in school meals

Here we highlight two examples of the successful introduction of sustainable food in Italian school canteens:

- **Organic food and local products in Rome school canteens (CASE STUDY 1)**
- **Fresh Italian fish in networks of school canteens in Marche Region and at national level (CASE STUDY 2)**



# CASE STUDY 1

## Sustainable school canteens in Rome

The current specification regulating the management of school meals is the result of a work started in 2001

- ▶ The duration of the contract is January 2014 – June 2017
- ▶ Number of meals served each day: 150.000
- ▶ The framework of the contract divides the municipal territory into 11 lots
- ▶ Starting price: average cost of a meal € 4.55 (taxes not included)
- ▶ Annual turnover, gross any discount: €682.500
- ▶ 740 schools prepare their own meals on site; only 8% of school canteens get shipped meals





# GOALS

- Upgrading the **quality, food safety and nutritional value** of school menus, with special attention to children obesity issues
- Proposal of a **sustainable production and consumption pattern**, anticipating the rules established in art. N. 2 of legislative decree 163/2006, regulating public contracts: *«The principle of cheapness must be subordinated to criteria inspired by social requirements, as well as by healthcare, environmental conservation and sustainable development»*

*how we reached such goals:*

## **A - introduction of ORGANIC products**

**50% of fruits, vegetables and cheese = organic**

The switch to organic food has raised the average cost of a meal of 6 %.

- ▶ **FOOD SECURITY:** in bio-dedicated food chains there is less toxicological hazard, because there are no pesticide residues. Organic produce involves ethic and cultural values, and it sets food security, and therefore the human being, above economical logics.
- ▶ **ENVIRONMENTAL SAFETY:** organic agriculture has specific rules in order to manage farming and breeding practices correctly and in an environmental-safe way.

*how we reached such goals:*

## **B - introduction of LOCAL products**

**80 % of all food** (beef meat, many varieties of fruit, vegetable and cheese) = **from farms located at < 300 km**

The switch to local food has raised the average cost of a meal of 1.4 % (€ 0.07).

According to the **European legislation**, the use of local products can be included in a contract only if:

- it involves qualitative benefits or lower health risks for users
- it involves advantages in terms of reduced environmental impact compared to the use of "free market" products
- the products themselves are protected by EU law (eg PDO, PGI)

# Steps acted by the Municipality of Rome to promote the use of local products in school meals

1. Introduction of **PDO** (Protected Denomination of Origin) and **PGI** (Protected Geographical Indication) **products from Lazio Region**
2. Use of **means of transport at low environmental impact** throughout the supply chain
3. **Seasonality**
4. **Recipes' variety**





# Introduction of PDO and PGI products from Lazio Region

- ▶ Mozzarella di bufala PDO (buffalo milk mozzarella-cheese)
- ▶ Pecorino Romano PDO (sheep cheese)
- ▶ Ricotta Romana PDO
- ▶ Beef PGI (slow growing old breeds: Chianina, Marchigiana, Romagnola)
- ▶ Olio della Sabina PDO (olive oil)



# Seasonality and recipes' variety

- ▶ The adoption of recipes with ingredients that are **not available in a certain season does not support local products use**. To avoid this, common vegetables such as zucchini are now used only in summertime, even if they are available in the markets all year long, often imported. The same principle has been adopted for other products (fruits, vegetables, etc).
- ▶ To guarantee a greater food variety, two menus have been introduced: **a summer and a winter one** (they are both based on a 9-week menu cycle).
- ▶ Such a **long-cycle menu** supports the use of fresh seasonal food. About **160 different recipes** have been proposed.

<b>Appalto</b>	<b>n°controlli</b>	<b>n.controlli per anno scolastico</b>	<b>n° prescrizioni</b>	<b>n° penalità</b>	
<b>1999/2001</b>	<b>160</b>	<b>80</b>	<b>90</b>	<b>7</b>	
<b>2002/2004</b>	<b>2.588</b>	<b>1.035</b>	<b>1.200</b>	<b>634</b>	
<b>2004/2007</b>	<b>5.625</b>	<b>1.875</b>	<b>2.054</b>	<b>205</b>	
<b>2007/2012</b>	<b>13.500</b>	<b>2.700</b>	<b>600</b>	<b>1°liv.</b>	<b>2°liv.</b>
				<b>160</b>	<b>40</b>

# CASE STUDY 2

## Fresh Italian fish in networks of school canteens

Two projects have been carried out since 2013:

**A-**educational and nutritional campaign promoted by Marche Region “EAT WELL, GROW AS FIT AS A FISH”

**B-**project promoted by the Italian Ministry of Agriculture and Food Policies “FRESH FISH IN SCHOOL MEALS”



A

Educational and nutritional campaign  
promoted by Marche Region  
**EAT WELL, GROW AS FIT AS A FISH**  
*DDPF n.116/2013*





Since 2013, several Municipalities of Marche Region have been involved in a project (cofinanced by EU Funds) aimed at increasing the **consumption of local fresh fish in school canteens.**

In 2013/14 the project involved **13.000 students from 120 nursery, primary and lower secondary schools.**

The project has now been renewed (**2014/15**), and it involves even more Municipalities and schools.

**ALBERT sas** carried out the project on behalf of **13 Municipalities** in 2013/14, serving more than **180.000** fish meals.

In the current year (2014/15), we are working with **30 Municipalities.**

## MAIN AIMS OF THE PROJECT

- To develop **healthy and sustainable food habits** starting from early childhood; children are encouraged to eat all kind of foods and to gain a better knowledge of fish and related issues.
- To sustain and raise awareness on **maritime and small fishery traditions**, which are part of our cultural and socio-economic heritage.





## SUBJECTS INVOLVED

Public Administrations, Health Agencies, dietists, nutritional psychologists, marine biologists, teachers, parents, educational and social theatre operators, food technologists, all canteen operators, all people involved in the local supply chain from fishing to food processing, and of course **all pupils of the schools involved in the project.**





## AREAS OF INTERVENTION

The project has been articulated in two interrelated actions:

- **Technical-experimental action**
- **Educational action**



## AIMS OF THE TECHNICAL-EXPERIMENTAL ACTION

- ✓ To propose an innovative **food meal based on local fresh fish**, choosing species of low market value but excellent nutritional qualities, also adding value to local recipes and traditions.

**Species included: mackerels, anchovies, sardines , several types of mullet, whittings, trouts, several types of squid, clams and mantis shrimps.**



- ✓ To develop a “**best practice**” **operational protocol** for the introduction of local fresh fish in school canteens, taking into account all supply chain steps.



## AIMS OF THE EDUCATIONAL ACTION

- ✓ To modify children's attitude towards fish, to boost a healthy diet, and to enhance sustainable food consumption through a **psycho educational path** strongly based on emotional experiences.
- ✓ To develop a **series of guidelines** for the development of educational projects aimed at increasing fresh fish consumption in school canteens in Italy and abroad.
- ✓ To assess the **fish meal's likeability** by measuring leftovers, thus monitoring the effectiveness of the intervention.



# RESULTS















The great success of this project is witnessed also by an **official documentary realized by RAI EXPO**, focused on the different parts of the project and on the educational action carried out by ALBERT sas.

ALIMENTAZIONE
GASTRONOMIA
SOSTENIBILITÀ
SOCIETÀ
POLITICHE
SALUTE
INNOVAZIONE
TERRITORI
QUI EXPO

<p><b>Home Pappafish</b> 01:41 Roma (venerdì) ore 9:00</p>	<p><b>Expo marche</b> 01:01 Expo Marche - dir. attore</p>	<p><b>Telecamera</b> 01:39</p>	<p><b>Piccola pesca</b> 01:36</p>
<p><b>Psicologia alimentare</b> 00:51</p>	<p><b>Expo scuole</b> 01:44</p>	<p><b>Asta pesce</b> 01:52 Expo Marche porta ore 02:35</p>	<p><b>Pappafish</b> 03:26 Rimini-martedì 04.10.16</p>
<p><b>Mensa Pedaso</b> 01:31 Expo Marche porta ore 02:35</p>	<p><b>educazione alimentare</b> 02:08 psicologa alimentare</p>	<p><b>nuovi eroi</b> 01:19 Expo Marche porta ore 02:35</p>	<p><b>abitudini alime</b> 01:52 Expo Marche porta ore 02:35</p>

Video Mappa del video Mappa Credits

Con

**Pappafish, il progetto che porta il pesce a scuola**

**Le parole di Expo**

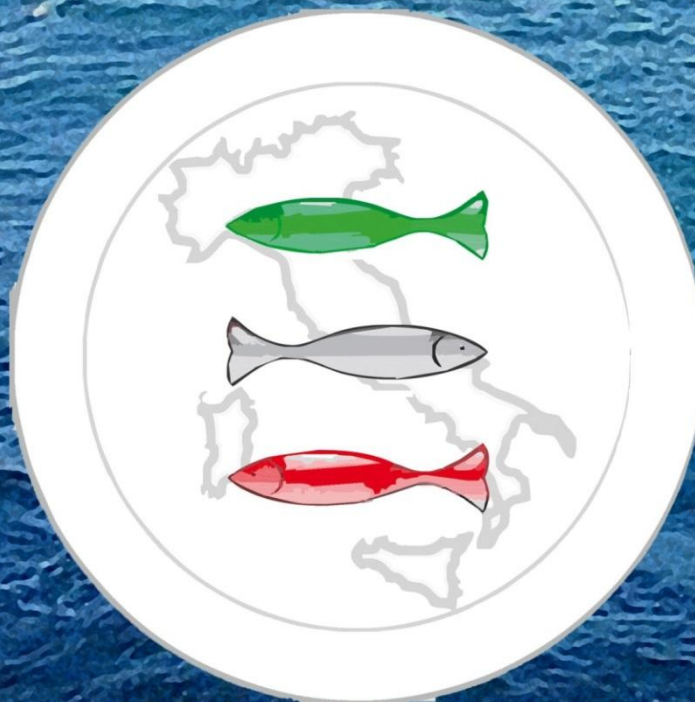
**B**

**Project promoted by the Italian  
Ministry of Agriculture and Food Policies  
FRESH FISH IN SCHOOL MEALS**

*Decreto MIPAAF n.236/2014*

# **Pesce Italiano a Mensa**

Progetto per la valorizzazione dell'acquacoltura marina italiana  
e per la promozione del consumo di pesce fresco  
nelle mense scolastiche e universitarie





**“Fresh fish in school meals” is a research and development project aimed at increasing the consumption of fresh fish from national fish farms in school canteens.**

The project has been planned, developed and carried out by ALBERT sas, with the financial support of the Italian Ministry of Agriculture and Food Policies – DG Fishery and Aquaculture.



## SUBJECTS INVOLVED

- **Canteen of University of Rome 1 “Sapienza”**
- **Nursery and primary schools of the Municipalities of Trieste, La Spezia, Manfredonia**

These four subjects are representative of the different mass caterers and school canteens present in the Italian territory.





## MAIN AIMS OF THE PROJECT

- ✓ To develop a **traceable and trustworthy “fresh fish supply chain”** in university and school canteens, taking into account all relevant steps: fish farming, product processing, logistics and transport, recipe preparation and meal delivery.
- ✓ To develop a **best practice model for the consumption of fresh fish** in university and school canteens, in Italy and abroad, taking into account all relevant issues: technical, economic and management aspects, likeability, operational procedures, etc.
- ✓ To ensure replicability of the pilot project, the model is described in a **Manual** for Public Administrations.



The project has successfully tested the feasibility and likeability of several recipes based on farmed sea bass (*Dicentrarchus labrax*) and gilt-head bream (*Sparus aurata*), such as fish balls, pasta with fish sauce, baked fish.



# GENERAL CONCLUSIONS



## CHALLENGES...

- ✓ School menus are planned at the beginning of the year and have low flexibility. This causes difficulties with **products whose availability is not always predictable** (i.e. small fisheries products).
- ✓ Some steps of the **supply chain are not well developed** (especially in the processing stage).
- ✓ **Professional operators should be trained and monitored** throughout the supply chain.
- ✓ Some products have low market value, but their **cost increases significantly** due to supply chain criticalities (mainly processing).
- ✓ **Educational programs** should always support projects aimed at increasing sustainable consumption and at boosting healthy diets (esp. when it comes to less-liked food such as fish and vegetables).



## ... AND OPPORTUNITIES



- ✓ **Farmed products** (esp. fish farm products) ensure a constant and programmable supply.
- ✓ The **likeability of fresh food is much higher** than that of frozen food (this is especially true for fish, but it applies also to vegetables and other products).
- ✓ Some products that are not of great interest for adults are particularly **liked by children** (eg sardines, whittings, zucchini).
- ✓ New **job and development opportunities** for traceable and high-quality **supply chains** and sustainable **mass caterers**.
- ✓ Children have the opportunity to **improve food habits** and become **more responsible**, while regaining **cultural, ethical and social values**.

# THANK YOU FOR YOUR ATTENTION!

*For further information:*

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