



LIFE – The Tough Get Going – TTGG Project: Improving the lifecycle efficiency of PDO cheese



OriGin, Statutory General Assembly, Tbilisi, 23 September 2019



GRANA PADANO PDO CHEESE





PRODUCT CHARACTERISTICS:

- **Grana Padano PDO is a hard cheese from the Pianura Padana (Po River Valley), produced all year round.**
- **Produced with cows' milk from the production area** which is partially-skimmed, by natural surfacing of the cream.
- Over **1.000 litres** are needed to make **2 twin wheels** of cheese – so for 1kg of cheese one needs 15 l of milk.
- A mature wheel has a weight of **around 38 kg** and has a finely grained texture
- **Grana Padano must mature a minimum of 9 months to over 24 months**





PRODUCTION AREA



5 regions in Northern Italy (32 provinces):

Piedmont, Lombardy, Veneto, Emilia Romagna and Trentino



AN AGE-OLD HISTORY

- **Nearly 1.000 years ago**, the recipe for Grana Padano cheese was created by the monks of the Chiaravalle Abbey, as an ingenious way of preserving the surplus milk they produced
- Due to its **savoury taste** and the possibility of **conserving it in time**, it soon started being produced in all the valley, becoming the **most popular cheese** in northern Italy
- It became known as “*formaggio di grana*” (grainy cheese), or more simply “**Grana**”, because of its grainy texture (grana = grainy)
- The term “**Padano**” was later added to reflect its production area (*Valle Padana*)
- **1954**: Creation of the Grana Padano Protection Consortium
- **1955**: Grana Padano was recognised as Designation of Origin by Italian law
- **1996**: Grana Padano was granted its P.D.O. status by the EU



- **At 9 months of ageing**, after passing strict controls, each Grana Padano wheel is **fire-branded** with its distinctive brandmark, created by the Consorzio



- **The brandmark must appear on each wheel and the logo on pre-packaged portions or grated GRANA PADANO PDO.** This is a guarantee for the consumer of the authenticity of the product and its compliance to the Production Specification Rules
- All packaging firms must obtain an authorisation from the Consorzio





STATISTICS

Production 2018

4.932.996 wheels = 190.558 tons

GSV 2018 at production

1.613million Euro

GSV 2018 at consumption

2.812 million Euro

1.724 million € in Italy, 1.088 million € abroad

Producing dairies:

128

Seasoners

149

Packers

205

Organisations:

63,39% Cooperatives – 36,61 % Industries

Milk destined to GP production

22% of national production

N° of milk producing farms

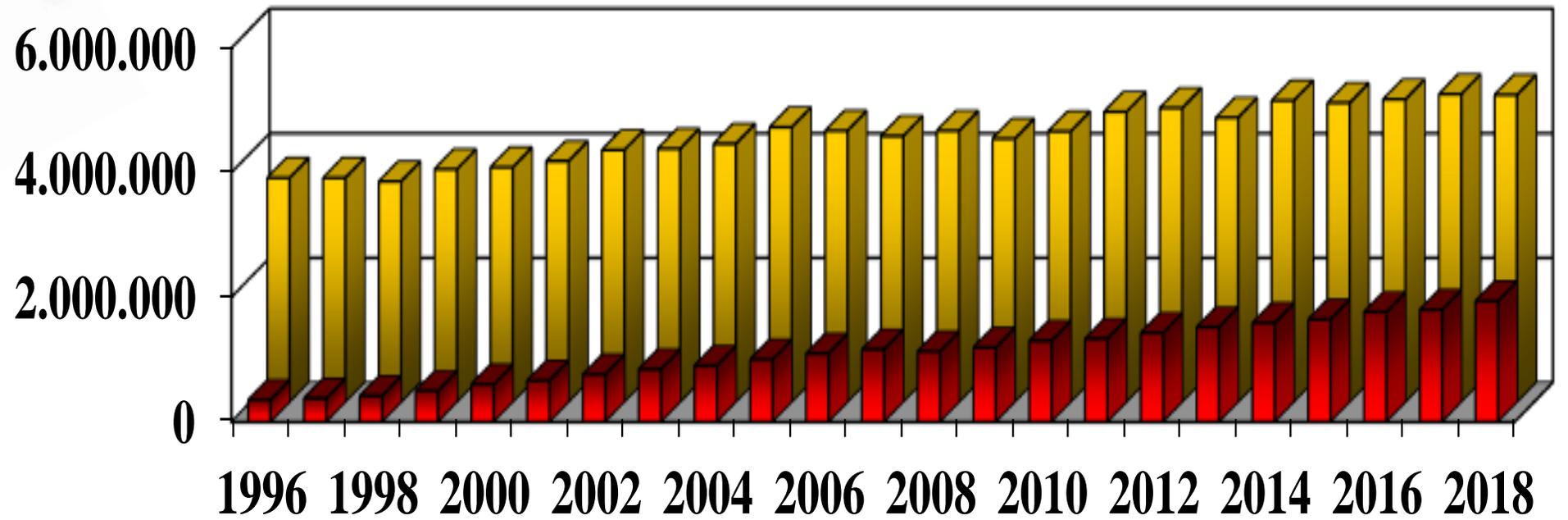
3.857

N° employees throughout

40.000

Exports 2018

1.938.928 wheels = 40% of production



■ Export ■ Production



**GRANA PADANO PDO is
the best-selling PDO cheese in the world**





GRANA PADANO PROTECTION CONSORTIUM





GRANA PADANO PDO CHEESE PROTECTION CONSORTIUM

- Established in 1954
- Non-profit organisation
- Reunites 100% of the Grana Padano producing dairies
- Brings together a total of 149 companies of which: 128 are dairies and 149 are seasoners
- Appointed by the Italian Ministry for Agriculture and Forestry (MIPAAF)
- Charged with protecting, promoting and enhancing the product, providing consumer information and generally taking care of the interests regarding its P.D.O. status and safeguarding it from abuse, unfair competition, imitation, improper use of the designation and any other behaviour forbidden by law during all stages of production, transformation and trade
- Promotes scientific, legal and market research keyed to improving means and methods of production, protection and marketing of Grana Padano cheese
- Has created and registered the “Grana Padano” trademark in Italy and numerous other countries



Since many years, **sustainability policy of the entire production chain** is one of the key issues for the Grana Padano PDO cheese protection Consortium.

It **promotes and finances various studies** of authoritative institutions with approaches and methodologies aimed at assessing the environmental impact of the entire Grana Padano PDO cheese production chain.

With the participation in the “*LIFE TTGG - The Tough Get Going*” project, the **commitment of the Consortium regarding sustainability is renewed.**



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(LIFE TTGG) PROJECT

LIFE 16 ENV/IT/000225 – LIFE TTGG
ENVIRONMENT - RESOURCE EFFICIENCY



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Introduction

The European Union (EU) has mentioned that **in the near future** companies will be able/will have to communicate the environmental footprint on their product labels (Roadmap to a Resource Efficient Europe. European Commission, 2011).



PEF



A

BETTER

B

C

AVERAGE

D

E

WORSE



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The European Union with the Roadmap to a Resource Efficient Europe outlines how to transform Europe's economy into a sustainable one by 2050. It defines:



The energy sector as a priority



The food sector, one of the most key sectors



Circular economy action plan



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The *LIFE TTGG project - The Tough Get Going* aims to **improve the efficiency of cheese production** processes in Europe, reduce the environmental impact and thus achieve more sustainable production and consumption.

This through the development of an **Environmental Decision Support Software (EDSS)** for PDO (hard and semi-hard) cheeses from cows' milk, capable of assessing the Product Environmental Footprint (PEF) and encouraging its reduction.

This software will **favour the application of the best solutions and techniques to optimize the performance of the entire supply and production chain** (with a "cradle to grave" approach), allowing the impact of the proposed technical solutions to be identified, described and evaluated in real cases.

The result will be the **creation of a reliable tool and proven methodologies** to be proposed to other EU PDO consortia, in the hope that they can become a reference for environmental innovation and quality production.



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Partnership and budget

BUDGET : 2,148,987 € (EU contribution 1,270,869 €)

DURATION : 4 years (July 2017 – June 2021)

COORDINATOR: Department of energy - Politecnico di Milano

RESEARCH INSTITUTIONS:



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OTHER PARTNERS:



oriGIn



ENERSEM

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Objective and scope

OBJECTIVE: developing a **software** to calculate and to reduce the environmental footprint (cradle to grave approach) of PDO cheeses.



European Commission

PEF

**Not just about climate change:
16 environmental indicators**

SCOPE: optimising the environmental and economic performance of the involved players (**farms, dairies and packaging manufacturers**). Raising the environmental awareness of individual manufacturers and consumers.

In terms of raw milk volume per year, we are talking about 3,500,000 m³ (approx. 1,500 Olympic-size swimming pools).



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Ongoing project

How to manage livestock manure?



How to improve energy efficiency in dairy plants?



How to reduce food loss and food waste?





DEFINED REPRESENTATIVE SAMPLE

(from the Grana Padano production chain)

The energy sector as a priority

68 Farms

13 Dairies, only for the production phase

6 Dairies, with packaging activities

12 Packers





Benefits for the producing DAIRIES involved:

FOLLOW US

- have a **software available to calculate and reduce the environmental footprint (PEF)** of Grana Padano PDO cheese, specific to its production reality;
- drastically **reduce the costs of environmental certification**, to be ready for future legislative developments;
- a **free energy diagnosis** to meet the requirements of Legislative Decree 102/2014 with the aim of reducing the dairie's consumption over time;
- be ready for future legislative developments (e.g. possible environmental product labels).





Benefits for the PACKAGING COMPANIES involved:

FOLLOW US

Identify corporate choices and strategies in the context of:

- Functional food packaging solutions to improve waste management and especially within recycling processes;
- verification of the environmental benefits derived from the application of bio-based materials (if used);
- activities to increase the role of packaging in food waste prevention;
- identification of design strategies for the development of packaging solutions with low environmental impact.





Objectives

- Developing an **effective and shared system to calculate and to reduce the environmental footprint**, in compliance with the Product Environmental Footprint methodology (PEF);
- **Simplifying PEF calculation** and ease company decision-making, through user-friendly tools;
- Raising the awareness of individual manufacturers, **encouraging the environmental certification** of their products, spreading the PEF methodology to PDOs cheese Consortia;
- **Optimising the environmental and economic performance** of the involved players (farms, dairies and packaging manufacturers);
- **Increasing the awareness of consumers and stakeholders on PEF**, through targeted information and communication campaigns;
- **Transferring the acquired know-how** to other European PDO and PGI products.



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Thank you!



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