

CoRFiLaC



CoRFiLaC

Since 1990



CoRFiLaC, Ragusa, Italy

Consorzio Ricerca Filiera Lattiero-Casearia

CoRFiLaC



**The idea of CoRFiLaC was born
working with Sicilian Farmers and
at CORNELL UNIVERSITY in 1987**

with

Licitra's PhD program

and continued with

Stefania Carpino MS & PhD program

and other researchers studying

in different International University

Management, Exstention Service.



Nutrition

- Feed analysis
- Feedbank,
- CPM Dairy/Diet formulation



Milking Systems and Milking Machines



Facilities and cow comfort



Hoof care



Forage quality



BCS



Reproduction

Best Farmers directed Research

- Nutrition & Management on Line
- Management Regression Model
- **Milk quality & Mastitis control progr.**
- Foot pathologies and the effect on Production and Reproduction.
- **Particle size with image analysis**
- Mini yield of cheese production
- Economical effect on management decisions



Mission since 1993

- Developing research of the **Historic Sicilian cheeses** and their production, in order to evidence the importance of tradition, biodiversity and respect of nature in a civilized society.

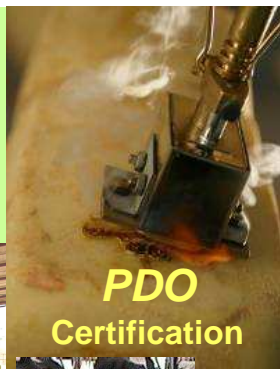
to many technicians and researchers



CoRFiLaC, a link between consumers and producers

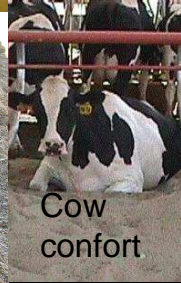


**Extention Service
to produce
high quality cheese**



Nutrition

- Feed analysis
- Feedbank,
- CPM Dairy/Diet formulation



**Forage quality and
their AROMA \$ HEALTH
property**



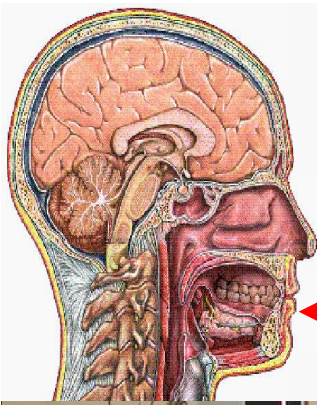
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CoRFiLaC Consumers directed Research

- **Characterize traditional cheese making technology**
- **Importance of traditional tools (to support EU decisions)**
- **Food safety of cheeses produced with traditional systems**
- **Aromatic and sensorial profile of traditional cheeses (importance of *Biodiversity factors*)**
- **Healthy properties of traditional cheeses**





Ortonasal
Aroma





Electronic Macroscopy



In few words

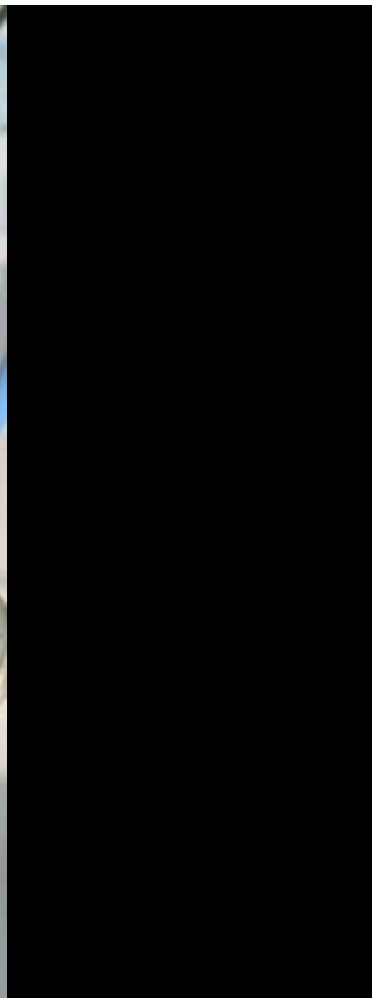
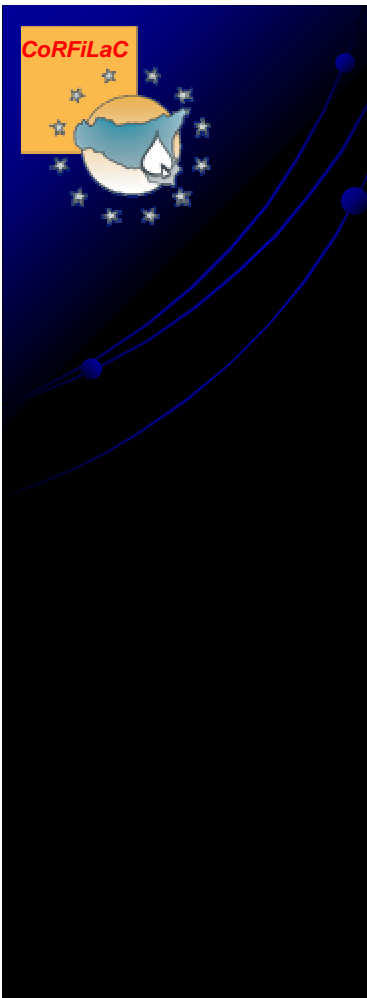
GCO



Smart Nose



Very High
Technology
to serve the
Tradition



Tecnology serving the tradition

CoRFiLaC
Pilot Cheese Plant





● Mediterranean Institute of Culinary Art of Sicily, "Micas"

to witness the wine and gastronomic heritage of the Mediterranean basin, searching for tradition and using it as a carrier of history, culture and customs.

short specialized cooking courses

famous chefs, researchers and experts organize

for opinion leaders, gourmets, journalists, and lovers of the world of gastronomy.



CoRFiLaC Tracciabilità Culturale *On Line*

The collage features several key elements: a brown cow grazing in a field; a person in a dark shirt stirring a pot; a cheese shop with various cheeses; a large wheel of cheese with a molecular model and a green circuit board overlaid on it; a plate of food with a red sauce; a group of five people sitting on a stone wall; and a field of pink flowers. The CoRFiLaC logo is in the top left corner.



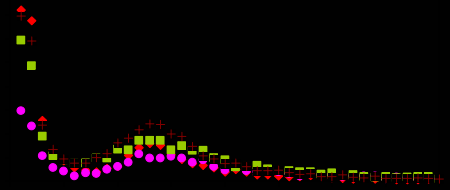
Image analysis applications

Measurement of Gas Holes and Mechanical Openness in Cheese by Image Analysis



Caccamo et al. JDS, 2004. 87:739-748

Method to measure feed particles by image analysis



Licitra et al. JAS, 2005 83:suppl. 1, 252



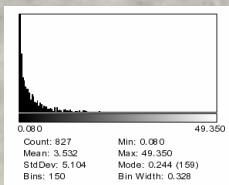
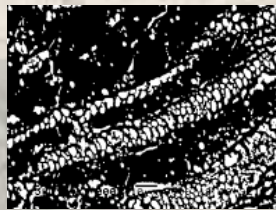
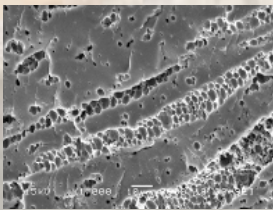
Internal microstructure of the main traditional Sicilian cheeses, by scanning electron microscope (SEM).



Microstructure of traditional Sicilian Cheeses, and quantitative analysis by scanning SEM images

**Fibrous microstructure
Pasta Filata cheeses**

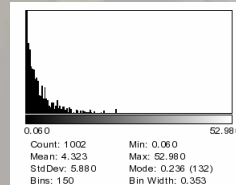
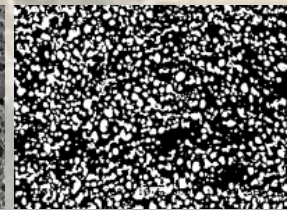
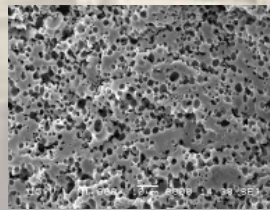
Ragusano DOP 9 Months



Moisture: 34,63%
Porosity: 0,2377
Pores: 828

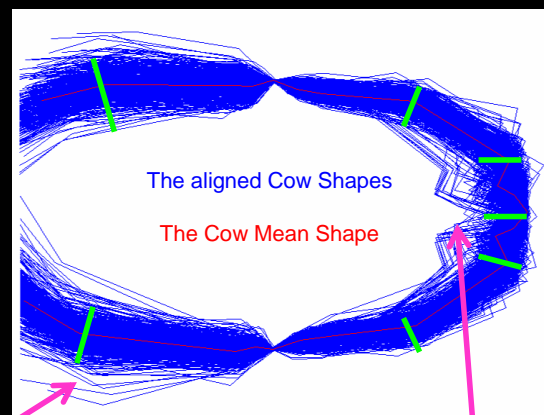
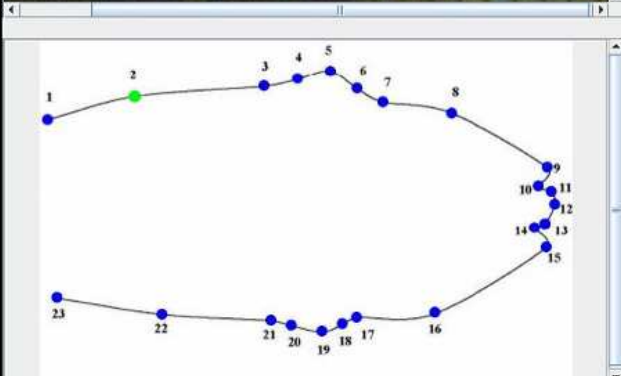
**Sponge-like
microstructure
Pressed cheeses**

Fiore Sicano
1 Month



Moisture: 40,92 %
Porosity: 0,3525
Pores: 1004

Modeling Cow Body Shape for Objective Estimation of Body Condition Score from Digital Images

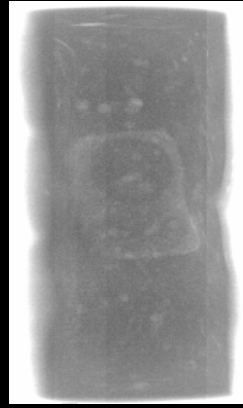


Outliers: Cow Body Distortion

Outliers:
Labelling
Errors

Shapes of cows are reconstructed by using a linear combination of basis *shape*

An X-Ray System to assess Ragusano PDO cheese quality



OK



NO