

Creating a Unique Australian Cheese



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CHAPTERS

- 1 - Introduction**
- 2 - Purposes**
- 3 - Some figures**
- 4 - Terroir – Link with the territory**
- 5 - Suggestions**
- 6 - Work plane**
- 7 - Some examples**
- 8 - Ageing**
- 9 - Cheese is art**
- 10 - Conclusions**

1 - Introduction

This presentation will cover figures related to the current situation of the dairy market in Australia and worldwide.

My personal passion for this field, my working experiences in different Countries and some trips to Australia have encouraged me to write about it.

The dairy industry was and remains a strategic sector, and its dynamics are constantly evolving in an increasingly global market.

It is therefore crucial to have a clear vision in order to have a clear strategy for the future.

The ultimate aim of this work is to provide some suggestions which I hope will be useful for the Australian dairy sector, a country which hosted me and allowed me to experience new positive events in my life, both professional and personally.

2 - Purposes:

The dairy industry is constantly evolving:

- **Technological innovations**
- **Commercial dynamics**
- **Change of demand**

Such dynamics will logically influence and inflate increasingly production and commercial strategies.

Current globalization process has also influenced the dairy industry, as trade patterns have changed, and new figures have emerged that, until a few years ago, were not present, such as China and other Asian countries.

"New entries" will significantly affect the dairy market, in terms of quantity and quality of product.

It is therefore essential to have such aspects in place to apply appropriate production and commercial strategies for the future.

3 - SOME FIGURES

• Australia

AUSTRALIA Dairy Season: July 1 st - June 30 th					
'000 Ton	2012/13	2013/14	2014/15	2015/16	2016/17
Raw material area					
Number of cows ('000 head)	1.688	1.647	1.689	1.663	
<u>Milk Production (Million liters)</u>	<u>9.196</u>	<u>9.236</u>	<u>9.732</u>	<u>9.679</u>	
± % from previous year		+0,4%	+5,4%	-0,5%	
Dairy Production MOVING AVERAGE of produced VOLUMES in Australia					
Liquid milk (Mio Liters)	2.445	2.467	2.485	2.516	
<u>Butter</u>	<u>83</u>	<u>84</u>	<u>83</u>	<u>80</u>	
± % from previous year		+1,2%	-0,4%	-4,3%	
<u>Butteroil</u>	<u>15</u>	<u>12</u>	<u>14</u>	<u>16</u>	
± % from previous year		-24,9%	+17,5%	+15,7%	
<u>Cheese</u>	<u>316</u>	<u>289</u>	<u>325</u>	<u>325</u>	
± % from previous year		-8,4%	+12,3%	+0,2%	
of which Cheddar cheese					
<u>WMP (whole milk powder)</u>	<u>109</u>	<u>126</u>	<u>97</u>	<u>66</u>	
± % from previous year		+16,1%	-23,3%	-31,7%	
<u>SMP (skimmed milk powder)</u>	<u>224</u>	<u>211</u>	<u>242</u>	<u>256</u>	
± % from previous year		-5,8%	+14,8%	+5,6%	
Casein	4,5	3,5	0,0		
<u>Whey powder</u>	<u>63</u>	<u>56</u>	<u>52</u>	<u>45</u>	
± % from previous year		-12,5%	-6,7%	-13,8%	

EXPORT AUSTRALIA: Main 10 purchasers of Bulk and Pack. milk in 2016 (Tons)								
Country	2011	2012	2013	2014	2015	2016	± % on 2015 *	± % on 2014 *
China	4.306	12.908	20.225	47.514	58.945	64.997	+10,27%	+36,80%
Singapore	28.803	27.775	27.023	30.883	33.732	38.486	+14,09%	+24,62%
Malaysia	2.977	1.928	1.857	2.498	12.867	14.191	+10,29%	+468%
Hong Kong	15.687	14.628	14.422	14.710	13.042	13.427	+2,96%	-8,72%
Philippines	5.734	2.509	5.431	8.735	6.714	12.689	+89,01%	+45,28%
Vietnam	2.351	2.656	1.989	4.091	5.183	7.532	+45,31%	+84,11%
Papua New Guinea	4.655	5.172	5.901	6.380	6.240	5.881	-5,75%	-7,82%
Samoa (Western)	1.502	1.730	2.073	1.808	2.155	3.145	+45,92%	+73,93%
Myanmar	278	184	297	663	908	2.195	+142%	+231%
Taiwan	6.199	5.187	5.941	7.832	2.099	2.051	-2,28%	-73,82%

Source: **Processed by Clal based on GTIS data**

* Change from the same period of previous year.

EXPORT AUSTRALIA: Main 10 purchasers of Butter in 2016 (Tons)

Country	2011	2012	2013	2014	2015	2016	± % on 2015 *	± % on 2014 *
Thailand	3.332	2.316	2.809	2.551	3.089	3.500	+13,33%	+37,23%
Singapore	5.062	3.881	4.867	5.931	4.573	3.462	-24,28%	-41,62%
Malaysia	3.248	2.724	2.375	3.178	3.806	3.093	-18,75%	-2,67%
Korea, South	2.836	2.317	1.751	1.305	2.665	3.071	+15,20%	+135%
United States	754	2.269	1.949	1.175	2.001	2.041	+2,01%	+73,73%
Hong Kong	2.542	2.200	2.699	2.516	2.060	1.958	-4,93%	-22,18%
China	869	1.990	1.719	1.465	2.325	1.861	-19,95%	+27,00%
United Arab Emirates	137	907	999	3.769	2.044	1.825	-10,72%	-51,59%
Taiwan	1.345	2.014	1.605	1.530	2.061	1.782	-13,53%	+16,48%
Kazakhstan	-	291	120	319	-	854	-	+168%

Source: Processed by Clal based on GTIS data

* Change from the same period of previous year.

EXPORT AUSTRALIA: Main 10 purchasers of Cheese in 2016 (Tons)

Country	2011	2012	2013	2014	2015	2016	± % on 2015 *	± % on 2014 *
Japan	91.479	98.621	87.945	76.960	94.256	83.133	-11,80%	+8,02%
China	6.378	8.837	11.874	16.566	15.821	19.689	+24,45%	+18,85%
Malaysia	8.315	5.732	6.612	7.838	7.597	8.289	+9,11%	+5,75%
Korea, South	7.041	7.355	5.994	5.369	7.764	8.225	+5,93%	+53,17%
United States	591	1.665	2.353	2.441	5.756	6.074	+5,53%	+149%
Singapore	6.576	5.036	5.178	5.362	5.455	5.323	-2,42%	-0,72%
Philippines	2.756	2.463	3.355	3.123	4.216	4.510	+6,96%	+44,42%
Taiwan	5.208	3.960	3.174	3.115	3.822	4.102	+7,32%	+31,68%
New Zealand	2.382	2.133	2.391	2.519	2.509	3.527	+40,55%	+40,01%
Indonesia	3.064	3.400	3.338	2.515	2.831	3.471	+22,61%	+37,99%

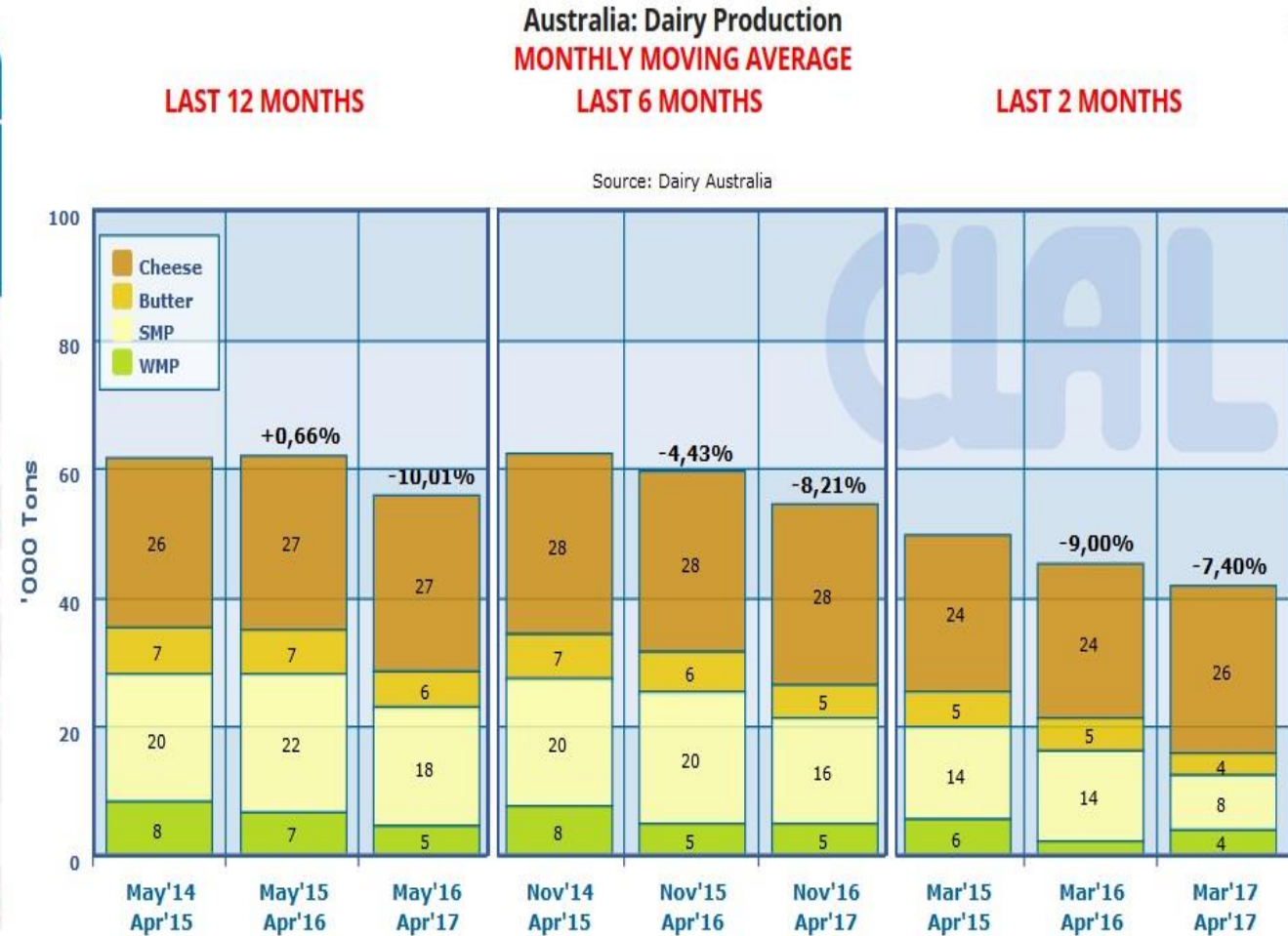
Source: Processed by Clal based on GTIS data

* Change from the same period of previous year.

IMPORT AUSTRALIA : Main 10 suppliers of Cheese in 2016 (Tons)								
Country	2011	2012	2013	2014	2015	2016	± % on 2015 *	± % on 2014 *
New Zealand	46.731	44.881	38.184	42.339	52.500	60.172	+14,61%	+42,12%
United States	9.259	11.460	11.181	17.694	14.919	14.234	-4,60%	-19,56%
Italy	3.346	3.590	3.680	3.841	4.734	4.631	-2,18%	+20,56%
Netherlands	1.867	2.298	2.221	1.973	2.653	2.685	+1,17%	+36,07%
Germany	943	1.239	1.656	1.462	1.848	2.334	+26,28%	+59,61%
Greece	1.382	1.758	1.844	1.905	1.992	2.129	+6,87%	+11,73%
France	952	1.206	1.609	1.699	1.904	1.958	+2,84%	+15,29%
United Kingdom	282	306	418	554	670	1.806	+169%	+226%
Denmark	1.920	2.027	1.945	1.886	2.000	1.663	-16,88%	-11,87%
Cyprus	443	628	806	1.085	1.180	1.573	+33,32%	+44,95%

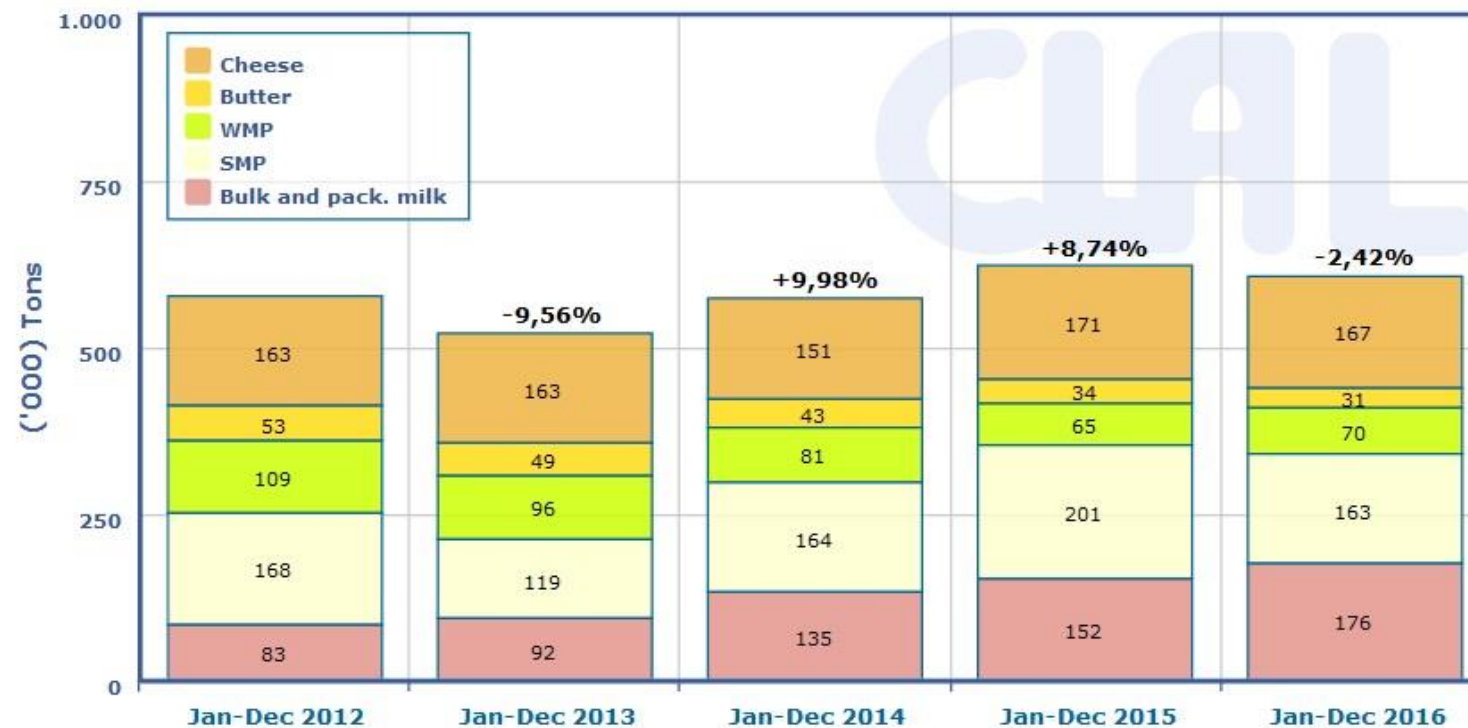
Source: Processed by Clal based on GTIS data

* Change from the same period of previous year.



Australia DAIRY PRODUCT - Total Export SMP, WMP, Butter, Cheese, Milk (Monthly Cumulative)

Data processed by Clal based on GTIS source

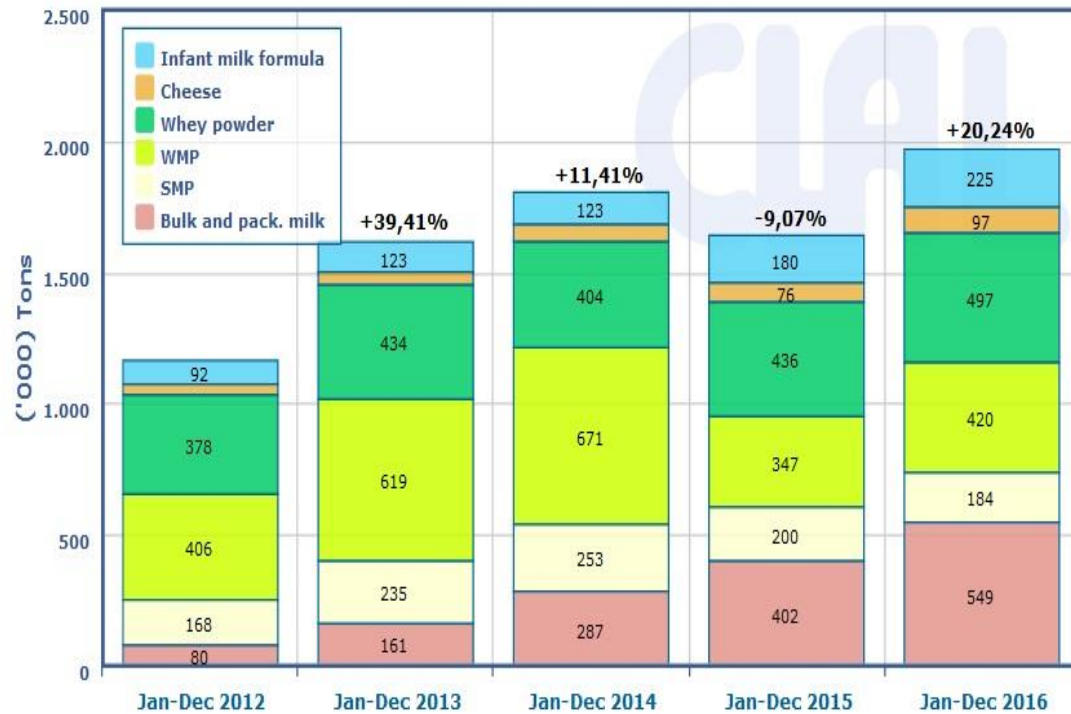


NOTE: Access to [World Dairy Trade](#), which also contains the processing of Import / Export of the Australia with MONTHLY UPDATES, is reserved for [Supporters of CLAL.it](#)

China:

China DAIRY PRODUCT - Total Import Milk, SMP, WMP, Cheese, Whey powder, Butter (Monthly Cumulative)

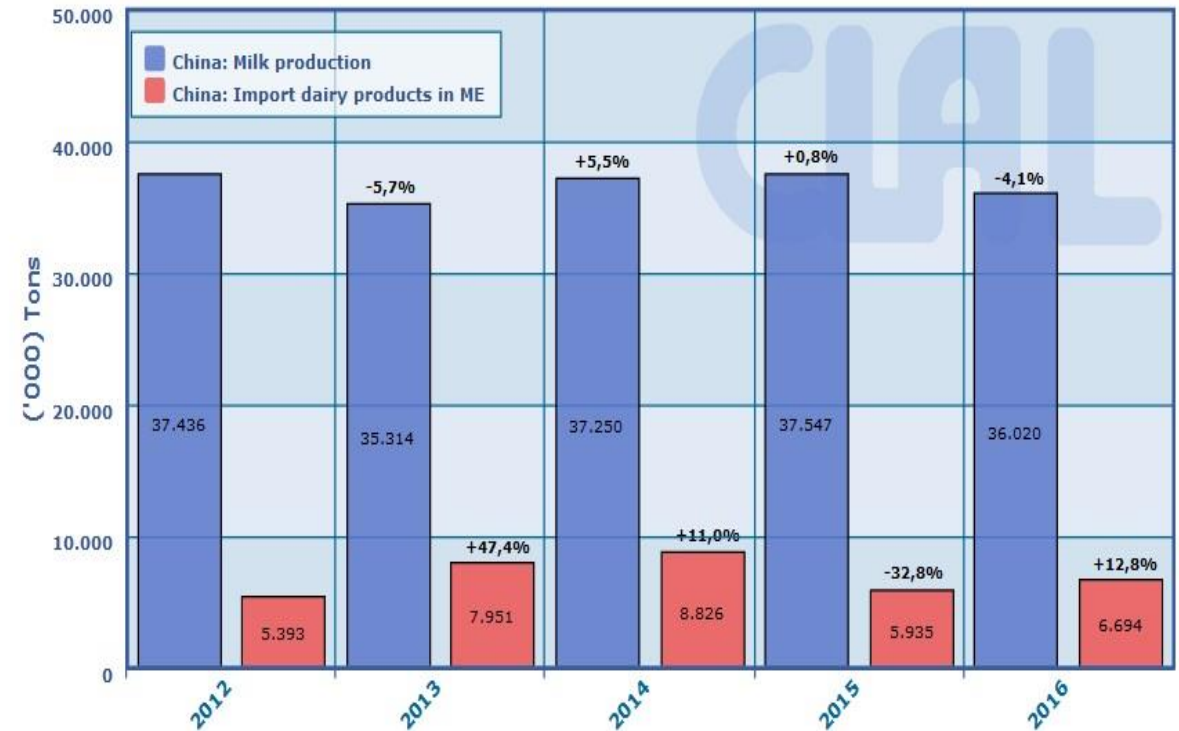
Data processed by Clal based on GTIS source



China - Milk production and dairy imports in milk equivalent

Products considered for M.E. calculation: SMP, WMP, Cheese, Condensed Milk, Bulk and Pack Milk, Yogurt

Data processed by Clal based on NBS and GTIS sources



NOTA: Access to [Dairy World Trade](http://DairyWorldTrade.com), which also contains the processing of Import / Export of the China, is reserved for Supporters di CLAL.it

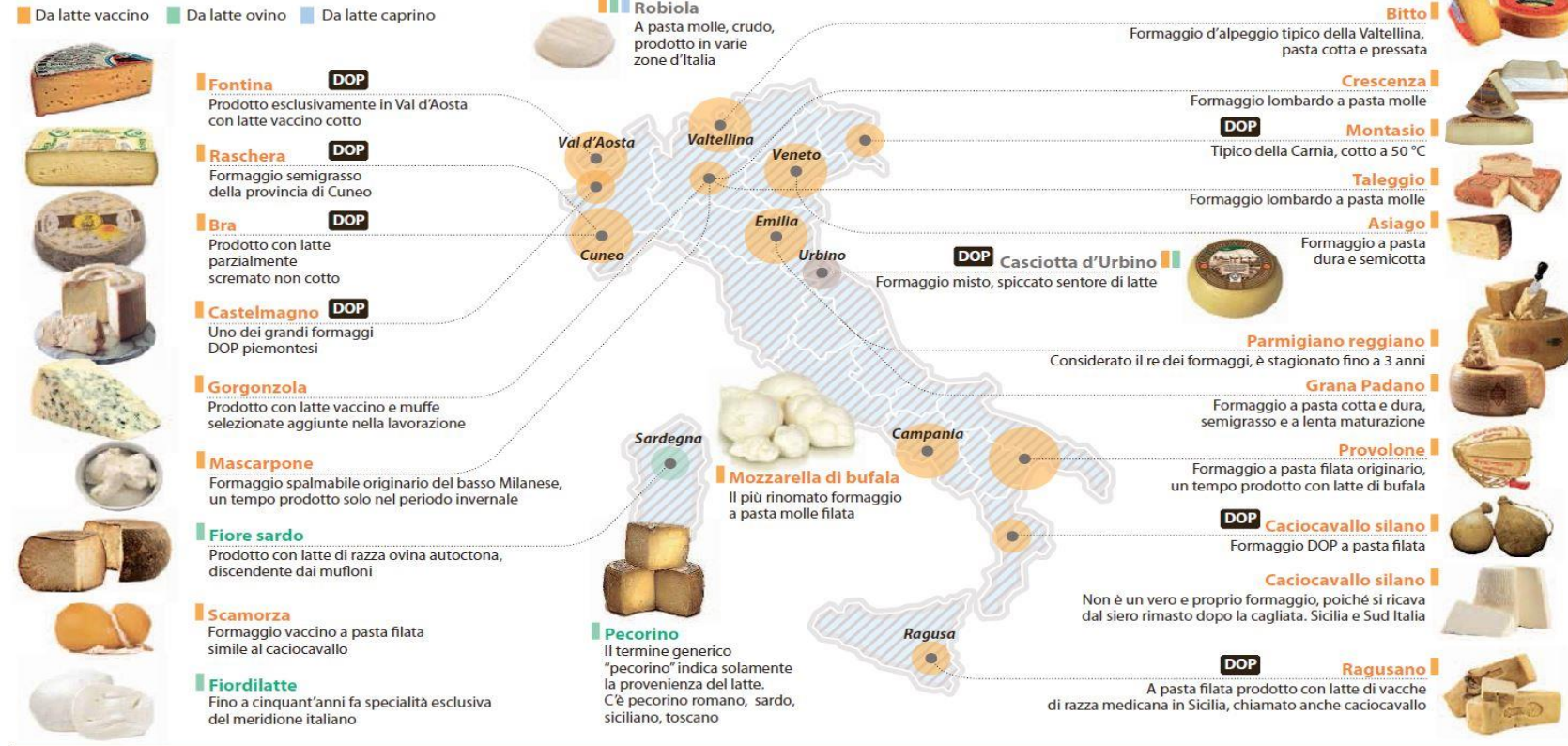
Japan:

JAPAN: DAIRY SECTOR								
x 1.000 ton								
RAW MATERIAL AREA	2013	2014	2015	2016	2016	2017	%	Period
Dairy cows number on February ^(1.000 heads)	923	893	870	871				
Dairy Farms number ('000)	19	19	18	17				
Milk production ^('000 Ton)	7.508	7.334	7.379	7.394	3.150	3.081	-2,2%	Jan-May 2017
Delivery of milk	7.390	7.271	7.352	7.295				
Farm-gate price (€ x 100 Kg)	70,13	67,92	74,19	84,29	79,11	83,45	+5,5%	Jan-Apr 2017
Drinking milk consumption	3.502	3.455	3.466	3.502				
% Milk destined to Drinking Milk	46,6%	47,1%	47,0%	47,4%				
DAIRY PRODUCTION	2013	2014	2015	2016	2016	2017	%	Period
Cream	115	117	113	112				
Fresh milk products, milk drinks (kl)	2.524	2.475	2.519	2.458				
Butter	64	62	66	64				
Cheese	134	133	141	147				
Condensed milk	40	38	39	39				
WMP (whole milk powder)	11	12	13	10				
Prepared milk powder	24	26	27	28				
SMP (skimmed milk powder)	129	121	130	124				
IMPORT	2013	2014	2015	2016	Period			
Butter (HS 0405)	4,6	12	16	13	Access the DWT for the latest updates			
Cheese (HS 0406) chart	236	232	249	258				
SMP (skimmed milk powder - HS 040210)	32	43	53	34				
Casein (HS 350110)	4,6	4,9	5,1	4,9				
Caseinates (HS 350190)	8,1	8,6	8,6	8,7				
Lactose pharmaceutical (HS 170211)	67	66	67	74				
Lactose edible (HS 170299)	3,8	3,5	2,7	1,9				
Prepared edible fats	21	22	23	23				
Other milk powder **	51	51	49	55	Jan-Jun 2017			

Italy: Italian dairy products are using 75% of Italian milk.

Italy is competing with other European milk producers, where their own raw material is costing 30% less.

Formaggi, la mappa delle eccellenze italiane



40% of Italian dairy products are D.O.P (denomination of origin) with a link between final product, environment and man's work's.

This strategy allows Italian dairy products to be competitive and to survive in the market.

4 - TERROIR: link with the territory



The term Terroir is a very complex concept which, due to language barriers, can be misunderstood or wrongly translated.

This term means the complex link between finished product, raw material, environment and man's work.

Terroir is the result of indepth knowledge of the various production factors managed and modulated by the work of man with the intent of giving a unique product with particular characteristics.

This work is perfectly expressed by French colleagues with the term "savoir faire" ... the knowledge of making...



France and its cheese

The link between territory and raw material is an added value to the product, because it characterizes and enhances it, removing imitation and competition.

5 - SUGGESTIONS:

The Australian dairy industry has reached high qualitative and quantitative standards in the past decades.

The product range represents the cultural heritage of Australia. Migratory flows have also led to dairy traditions of ancient countries and ancient times.

Examples: Seasoned and Pasta Filata Italian cheese , yoghurt and Greek feta and cheese from Northern Europe.



The concept of Australia as "young" country is far exceeded...

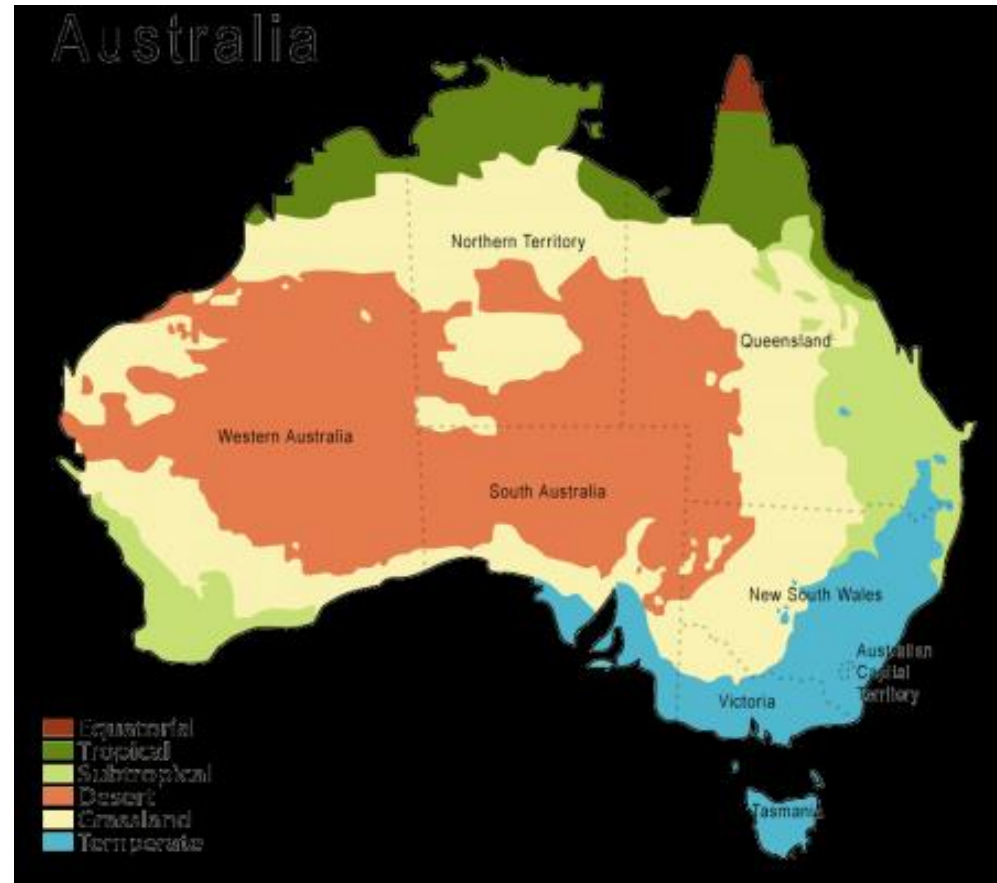


Australia has demonstrated its "savoir faire" from the hard work in the outback to the high quality and organizational level of its dairies.



The great climatic variety, flora and fauna, so carefully protected over the decades, are a unique and inimitable reality.

The continent Australia has all the rules in place to apply the concept of terroir concretely because the climatic conditions, the raw material and the professional experiences gained being unique and inimitable.





Australian savoir faire has a white cloth ready to be painted...

6 - WORK PLANE

The creation of Australian dairy products is a synergistic work, a new exciting field of work that has to involve the various figures of the sector.



This common work has to be seen as:

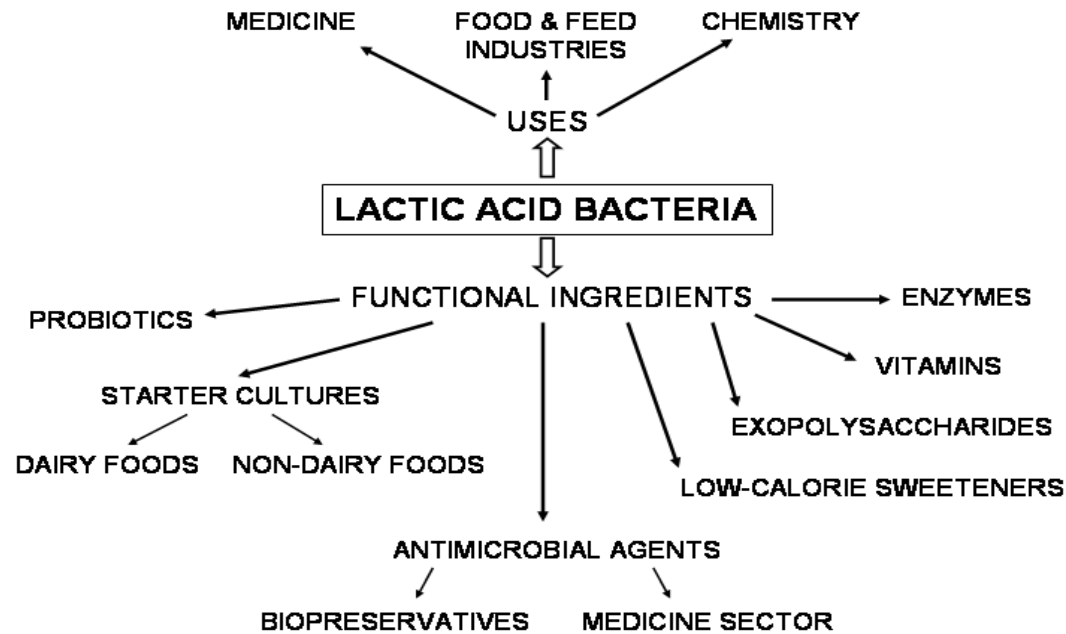
- **Common synergy work of the various figures: a flywheel for industry knowledge.**
- **Economic opportunities for the dairy industry economy.**
- **Medium-long term investment for the dairy industry.**
- **Social Benefits: A sustainable dairy chain, clear and fair to the various figures and careful control of the territory is a social benefit, a guarantee for the environment and for the economy in the medium to long term.**

Providing added value to dairy products involves improving and optimizing raw material according to its end use. The selection and production of optimal milk types for the various uses is already exploited in Europe.

This added value affects milk producers positively, sheltering them from strong fluctuations in demand and price.



The Ingredients industry will be strongly encouraged to invest in study and preparation of products ad hoc such as indigenous lactic starters with native strains and exclusive ingredients for new products.



The dairy processing industry has a white sheet to work on. New milk fractionation technologies, new ingredients and modern facilities are a thrilling testing bench. A product with strong links to the land and raw material also passes for new technologies.

Authorities will be stimulated to study new methods of control, research, creation of production rules, continuous updating and higher presence on the territory.

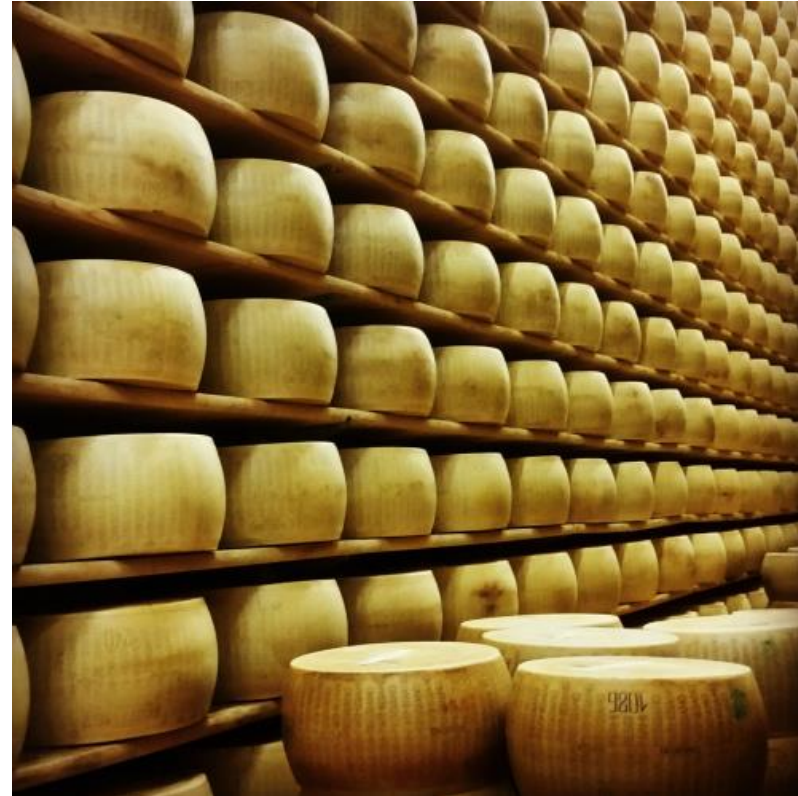


To conclude, the agricultural sector has a small number of employees, but with a high economic, social and strategic weight.

An investment to implement and protect their performances has high media coverage with low investments.

7 -EXAMPLES

Even cheese with over 1000 years of history, such as Grana Padano and the Mozzarella di Bufala Campana, are constantly evolving ...



An interesting example is Gran Kinara, a cheese produced in North of Italy with Grana Padano technology, but replacing the animal rennet with vegetable rennet.

The use of vegetable rennet extracted from the flowers of *Cynara cardunculus*, the common wild thistle that grows spontaneously also on the mountains, has allowed to offer a rare, sought after alternative to traditional animal rennet, which can contribute decisively to the "zero lactose" of the Gran Kinara and to provide original and pleasing organoleptic characteristics.



In addition, the use of a laser pantograph for shaping Gran Kinara has allowed to offer an exclusive product on the market as the end customer can have their own logo and thus differentiate and further characterize their product.



Laser pantograph working on Gran Kinara

This work of characterization, using vegetable rennet and obtaining international certifications such as Halal and Kosher, allowed this cheese to penetrate into closed market brands up to that time.





Also Mozzarella di Bufala, fruit of Italian savoir faire, continues to evolve...

The use of vegetable charcoal and lactase enzyme in to the milk has allowed further characterization, allowing it to be available to consumers with intolerance and digestive problems.



38° 30° Experience

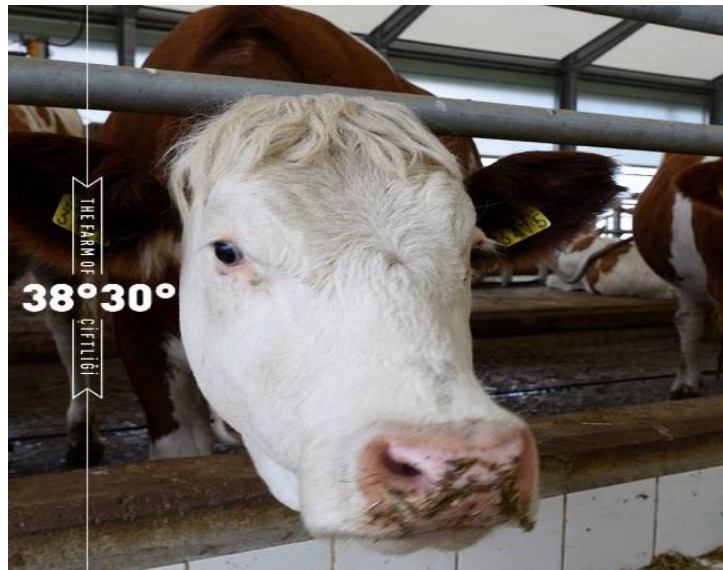
I personally worked as a consultant for two years at 38-30 Ciftligi, Turkey. This interesting project is going to be the second biggest modern art park in the World.



Artificial lake, work in progress



Inside the art park there are buffalo and cow farms and milk is transformed in the cheese factory.





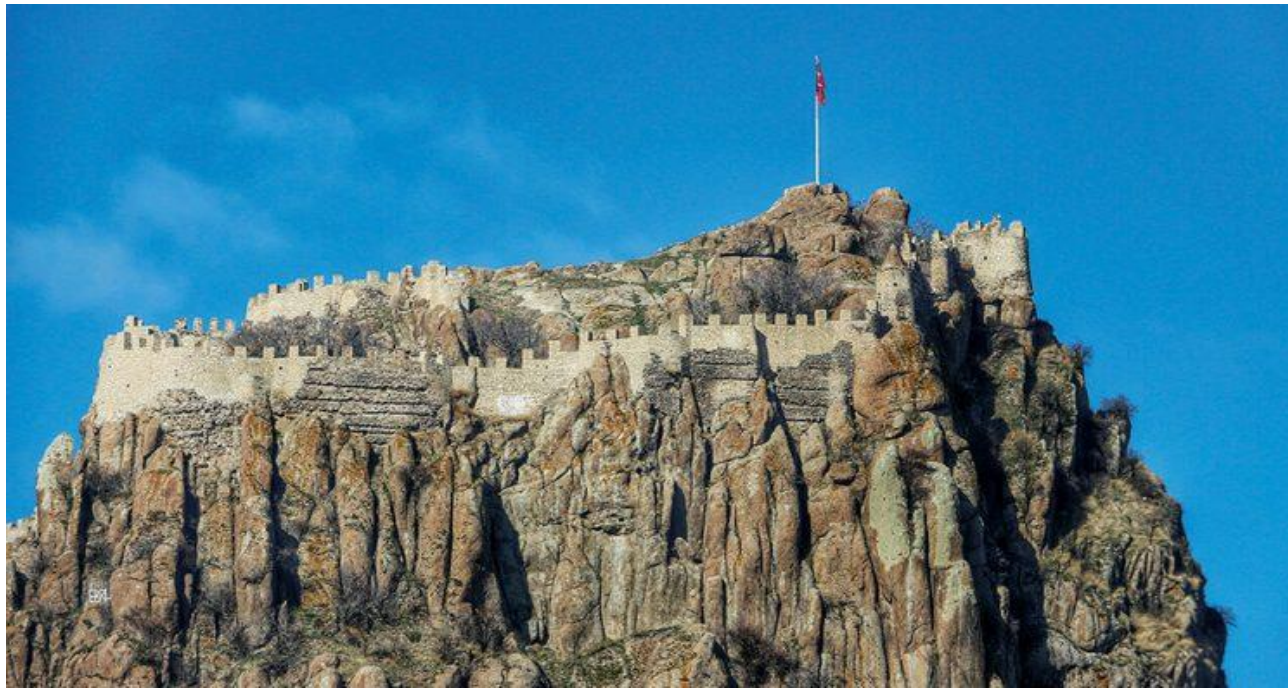
38-30 cheese factory



Being competitive in a dairy market with strong competition, maintaining quality levels and representing this unique project were my major challenges...

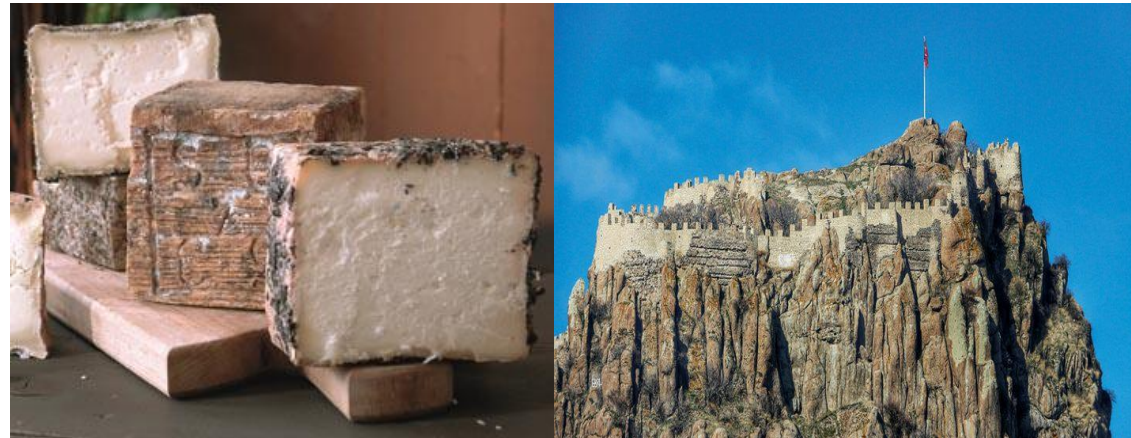


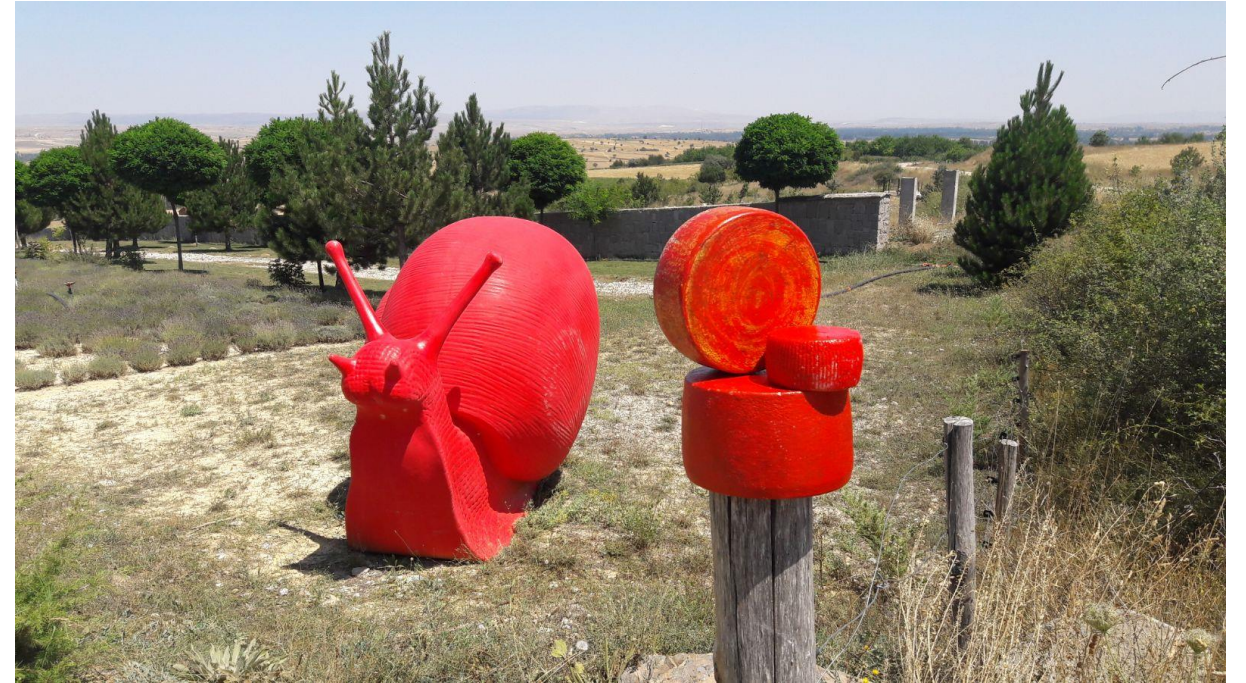
38-30 Snail, modern art



Afyonkarahisar Castle on the characteristic Anatolian rocks

We created a new line of cheese, in accordance with the local traditions and taste. There was a strong relationship between the project and our raw material.





The result was a new innovative cheese line with a direct link to the project, local traditions and high competitiveness on the market, thanks its uniqueness.

8 - AGEING

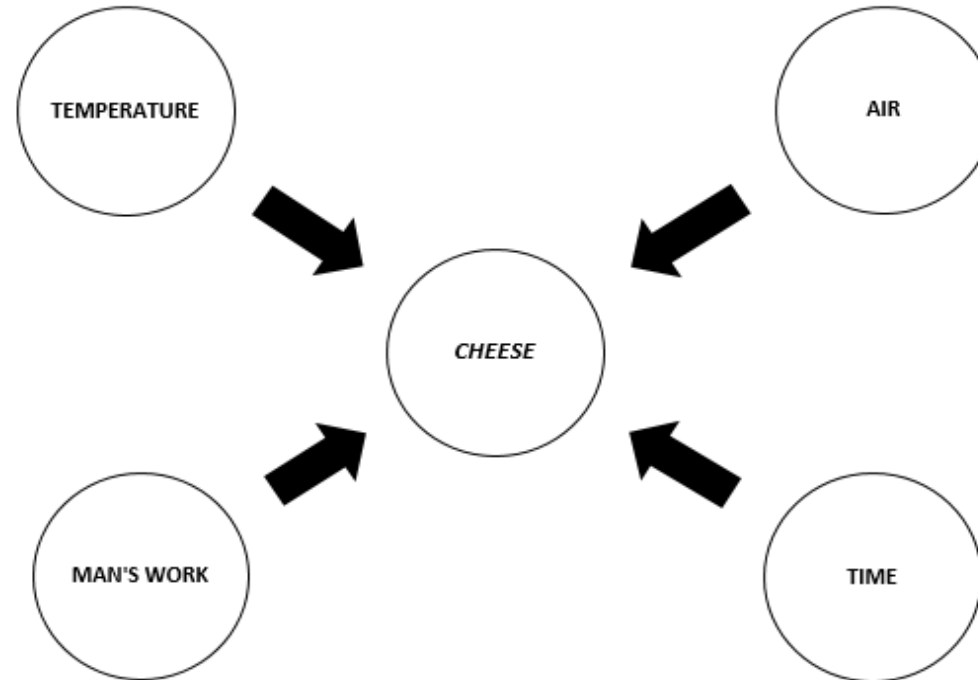


To make cheese we need one crazy man....to take care of cheese we need nine crazy men...

(Italian Proverb)

Ageing or affinage is a process required for many types of cheese.

Cheese should be seen as a living product that, due to various factors during the ageing process, expresses its characteristics.



An appropriate knowledge and modulation of these factors determines the final result of the cheese.

Seasoning is also one of the steps to work on characterizing and identifying Australian cheese.

An example: The most famous ham in the world, Parma Ham, is uniquely outstanding thanks to the breeze coming from the sea that accompanies it throughout its ripening.



Australia has more than 34,000 km of coastline.....

CHEESE IS ART

Cheese has been developed over many centuries; the result of a sophisticated knowledge of raw materials, climate and habitat.

If Art is the expression of human skill and imagination....

•

Then Cheese is Art.....

10 - CONCLUSIONS

- ✓ The dairy market is constantly evolving. Its dynamics are changing and will change more and more in the future.
- ✓ Markets considered competitive will change with the entry of new countries and exit of others.
- ✓ Australia has skillfully worked to improve and strengthen its dairy industry. Its future also depends on the characterization and protection of its products in an increasingly competitive market.
- ✓ The unique natural, climatic heritage and its work deserve to be represented also through its dairy products.
- ✓ It is essential to study a new strategy for the future as the dairy sector is not only a source of business, but also source of social stability and the protection of the territory.
- ✓ It is therefore time to show the savoir faire made in Australia ...



Thank you for your attention.....