

SOLAT – A REAL CONTEXT IN WHICH THE ETHICAL PASSPORT HAS BEEN DEVELOPED



The dairy farm, beyond being identified with a name and/or operational headquarters, is photographed by a drone with the aim of emphasizing the structure characteristics that are modern and avant-garde.

Aerial photograph (through a drone) of the SOLAT dairy farm



The progressive plants modernization and evolution respect to increasing strict hygiene requirements concerning production and workplace safety, has not influenced negatively traditional technologies and tools. In this way many traditional elements referring to milk processing technologies (cheesemaking and salting), equipment (boilers, skimmer, shovel, axes, cheese molds, etc.) and ageing places have been preserved.

Traditional production in SOLAT



Business activities that entail eventual consequences impacting on consumer, environment, require acceding to insurance policies in relation to problems caused by the production and management activities to third parties. Overcoming the cost containment logic, a policy insurance constitutes an ethical and short-sighted behavior and a form of respect and responsibility.

Non exhaustive trademarks insurance prospectus (www.serviziassicurazione.it)



The company implements several bio-protection systems including access control of people and vehicles, anti-intrusion systems, video surveillance, protection of the environment from potential contamination vectors such as birds and insects.

SOLAT bio-protection systems



The use of the latest available technologies allows making less expensive and sustainable the use of energy resources by reducing waste and emissions into the atmosphere.

Boiler burner in SOLAT



Dairy farm is the type of company operating in the food processing and production sector with a high demand in terms of water needs. The serum concentration allows reducing its volume and therefore making it less expensive to be transported and especially it allows recovering a considerable amount of hot water reused for cleaning and sanitizing, with evident water savings.

Serum concentrator in SOLAT



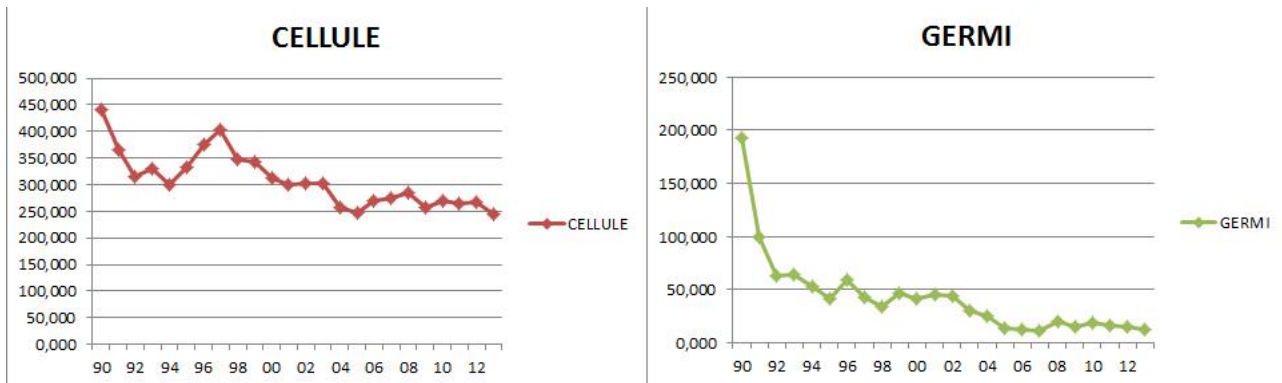
Temperature traditionally is measured in Réaumur degrees. It is a fundamental technological parameter as is necessary for an optimal curd cooking which also affects the product ability to eliminate any undesirable bacteria present. In fact, the cooking process is internationally recognized as a safety factor concerning products improperly considered to be at "raw milk".

Curd temperature control



Each shape is marked carrying out the Grana Padano logo, the province in which it has been produced, the sanitary authorization, the dairy farm identification code as part of the Consortium.

Grana Padano cheese in SOLAT



The payment to the milk quality over the years has brought a constant improvement: a gradual increase in the amount of fat and protein and a simultaneous decrease in the number of somatic cells well below legal requirement (400 000 cells/ml) and total bacterial load to a level even lower respect to the level expected for the marketed high-quality fresh pasteurized milk (30,000 ufc/ml).

Parameters trend in SOLAT over the years



Dairy processing companies receive milk from farms collected and stored under controlled conditions as specified by the production rules of Grana Padano cheese: whole milk deriving from two daily milkings and cooled at a temperature not lower than 8°C. In the case of raw milk direct sale, the producer must keep the product in a separate tank with refrigeration at 4°C.

2 tanks for the milk storage at different “T”s



The milk is transferred from companies to dairies by tanker. At this stage it is traced the product of any company registered conferring origin, number of milkings, milk quantity, temperature, etc. Transport of milk for Grana Padano cheese does not happen in refrigerated tankers.

CT452CZ, one of the milk vectors from farms to SOLAT



Conferenti

Scegli Cod_Allevix da quelli già censiti e tipo di conferente

socio

Cod_Allevix	Conferenti	tipo	
05385005	Filippini Fausto e Mauro s.s.	socio	104
07885108	Zambelli fratelli	socio	104
15285001	FERRARI STEFANO, PIETRO E GIANLUIGI s.s. Società Agricola	socio	104
17285003	Azienda Agricola MIGLIORATI CUGINI s.s.	socio	104
15285030	Azienda Agricola Premi Mauro	socio	104
10385008	CARLOTTI FRANCESCO & c. S.S.	socio	104
08885077	SANTINI EUGENIO e FABIO MARIO Soc. Agricola	socio	104
08885053	Belloni Amgelo & C. Società Agricola	socio	104
12285038	Scaglia Domenico & Figli s.s.	socio	104
08885096	Società Agricola Breda d'Alè di Tomasi Camillo & C. s.s.	socio	104
08885288	Turrini Agostino	socio	104
12285028	Finiletto Az. Agr. S.s.	socio	104
10385006	Soc. Agricola Maggini Giancarlo, Roberto, Tullio	socio	104
08885074	Società Agricola Breda d'Alè di Tomasi Camillo & C. s.s.	socio	104
08885070	Corini Giancarlo e C. SS Società Agricola	socio	104
12785015	Azienda Agricola Danesi Franco e Pierangelo s.s.	a contratto	104
077CR024	Roda Giovanni, Luigi, Angelo e Giuseppe Società Agricola s.s.	a contratto	104
08885073/1	LA FENAROLA di Bonometti Angelo e C. s.s. Società Agricola	socio	104
08885130	Az. Agr. DONINELLI RENATO	socio	104
077CR026	SISTI ANGELO, BERNARDO E MARCO Soc. Agricola s.s.s	a contratto	104
070CR001	AMBERGIO GIANCARLO E PAOLO società Agricola s.s.	a contratto	104

- Azienda (modifica)
- Mercato
- Situazione Sanitaria
- Bioprotezione
- Gestione risorse umane
- Gestione agronomica
- Risparmio energetico
- Gestione risorse idriche
- Sicurezza alimentare
- Naturalità
- Autorizzazioni/.....
- Pagamento Latte a Qualità
- Materie prime utilizzate
- Catalogo Produzioni
- Tradizionalità

The list of farms which supply milk to SOLAT identified by their legal name and farming code.

SOLAT list of suppliers



To produce the best Grana Padano cheese the ratio between protein and fat must be 1:1. Since milk is richer in fat than protein, is necessary removing part of them.

The milk deriving from two milkings stays for 12-24 hours in stainless steel tanks or in specific recipients ("affioratori"). Within this time about 50% of the cream emerges and it is separated by skimmed milk falling or by skimming emerging cream. Remaining partially skimmed is transferred to the boiler.

Emerging milk in a tank



Rennet is a substance able to cause milk proteins (caseins) coagulation. Rennet can be of different types:

- Animal: it derives from the calf, lamb, goat, chamois, pig stomach;
- Microbial: produced by the normal metabolism of microorganisms (usually mildews);

- Vegetable: the principles contained in plant parts: latex, seeds, flowers of plants such as fig tree, safflower, gallium, thistle, etc.

In the Grana Padano cheese processing usually natural calf rennet powder is employed.

Liquid and powder rennet



Salt production occurs mainly in the summer period usually in the saltworks located along the coast. The seawater is introduced and allowed to evaporate within large tanks placed on the coast. Several collections are carried out in relation to the systems used for evaporation.

The salt can also come from land surface or underground deposits. Salt mines are present in Italy, in Tuscany, Calabria and Sicily Regions.

Salt from saltworks



One of the major defects of Grana Padano cheese concerns the late swelling caused by environmental microorganisms (*Clostridium*) that produce gas and "swell" cheese forms altering their appearance ("balloons"). To prevent this phenomenon a natural enzyme with antibacterial activity and widely present in tears and in egg albumen is used. The lysozyme for Grana Padano cheese production is extracted from eggs and appears as a white powder, odorless and with a slightly sweet taste (E 1105).

Powder lysozyme



Quality and flavors derive mainly from the lactic flora. In order to allow a constant product quality, milk is added to the whey starter resulting from previous processing. The whey starter enriches milk with natural micro-organisms that have already worked well in the previously cheese production. The method is simple but non-trivial and gives continuity to the Grana Padano cheese quality that is still based on a totally handmade technology.

Input of the whey starter