GUIDELINES ON IMPLEMENTATION OF HORIZONTAL FOOD SAFETY AND PROTECTED DESIGNATION OF ORIGIN (PDO) REQUIREMENTS FOR THE PDO HALLOUMI/HELLIM PRODUCTION CHAIN

Funded by
the European Union

EU FOOD SAFETY
AB GIDA GÜVENLİĞİ

European Union Food Safety Project

Funded under the EU Aid Program for the Turkish Cypriot community (TCc), the "EU Food Safety Project" executed under the contract 2021/423-933 "Technical assistance to improve implementation of food safety standards and disease crisis preparedness", strives to support faster social and institutional development of the Turkish Cypriot community and higher economic growth of its agri-food chain sector. The aim is to achieve improved food safety, public health, animal health, and protection of the environment, and to mitigate the impact of potential exotic animal diseases, in particular those posing imminent threats. The project started in May 2021 and will be completed in April 2024.

For more information about the project, you can visit the project's website, follow its social media account and contact the project team through the following communication channels:

tccfoodsafetyproject.eu

tccfoodsafety

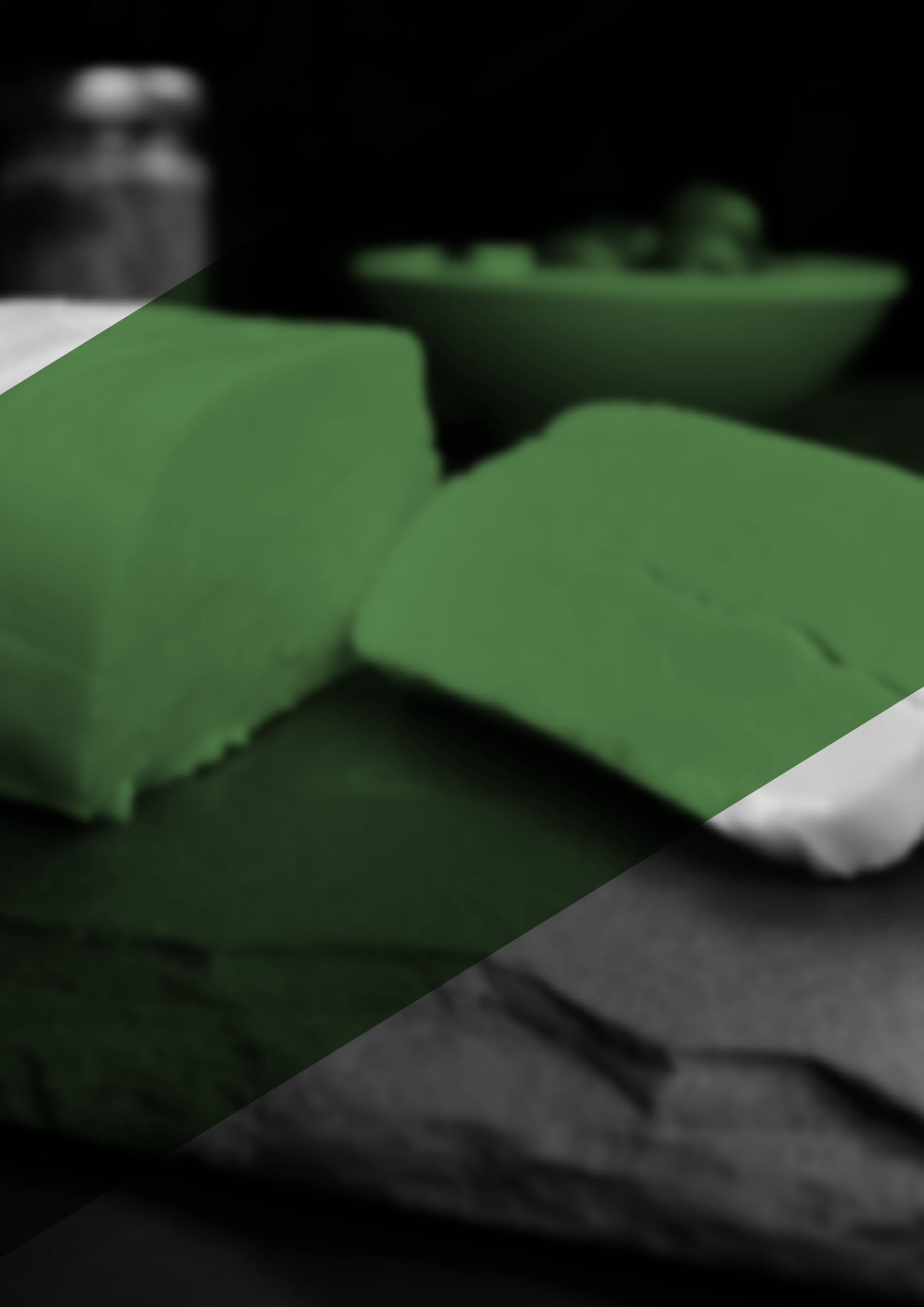
foodsafetyprojectTCc@gmail.com

+90 542 862 3000

GUIDELINES ON IMPLEMENTATION OF HORIZONTAL FOOD SAFETY AND PROTECTED DESIGNATION OF ORIGIN (PDO) REQUIREMENTS FOR THE PDO HALLOUMI/HELLIM PRODUCTION CHAIN

This publication was funded by the European Union. Its contents are the sole responsibility of the NSF Euro Consultants Consortium and do not necessarily reflect the views of the European Union.

EU FOOD SAFETY
AB GIDA GÜVENLİĞİ



CONTENTS

1. BACKGROUND 4
2. INTENDED AUDIENCE 4
3. AIM OF THE GUIDELINES 4
4. WHAT IS PDO? 4
5. PDO STAKEHOLDERS AND PRODUCTION PROCESS 5
6. FEED PRODUCTION 6
   6.1. Goat and Sheep PDO Feed 6
   6.2. Cow PDO Feed 7
7. MILK PRODUCTION 7
   7.1. What Is Required for a Farm to Become Eligible for PDO Milk Production? 8
   7.2. Good Dairy Practice 8
8. MILK COLLECTION AND TRANSPORTATION 23
   8.1. Collecting Milk from PDO Eligible Farms 23
   8.2. Transportation of Milk 24
   8.3. Delivery of Milk 24
9. MILK PROCESSING 24
   9.1. Main Requirements for PDO Halloumi/Hellim 24
   9.2. Reception of Raw Milk 25
   9.3. Separation of Production, Traceability 26
   9.4. Pasteurization 26
   9.5. PDO Halloumi/Hellim Production Process 27
   9.6. Labelling of PDO Halloumi/Hellim 27
   9.7. Own Controls (Laboratory Tests) 28

Annexes

Annex 1: Guidelines for Traceability Documentation of Feed Producers 29
Annex 2: Example of Feed Labelling 30
Annex 3: Veterinary Records on Diseased Animals 31
Annex 4: Form for Veterinary Treatments 31
Annex 5: Form for Recording Withdrawn Milk 32
Annex 6: Self-Assessment Procedure for Farms 33
Annex 7: Form for Recording Health Checks of Animals 36
Annex 8: Production Record for Feed 37
Annex 9: Form for Feed Purchase Records 37
Annex 10: Form for Feeding Records 38
Annex 11: Form for Feed Supplier List 38
Annex 12: Form for Recording Grazing 39
Annex 13: Form for List of Contacts 40
Annex 14: Form for Milk Production Records 41
Annex 15: Daily Farm Level Milk Production Record 42
Annex 16: Form for Recording Chemicals Used 43
Annex 17: Form for Recording Milk Temperature During Storage 43
Annex 18: Form for Water Monitoring 43
Annex 19: Form for Visitors' Logbook 44
Annex 20: Guidelines on Traceability for Milk Transporters 44
Annex 21: Baseline Instructions for Traceability 45
Annex 22: Detailed Description of Traceability System 46
Annex 23: Simulation Exercise for Internal Traceability Check 57
Annex 24: Procedure for Receiving Incoming Goods 58
Annex 25: Form for External Suppliers Approval 59
Annex 26: Form for External Service Supplier List 60
Annex 27: Form for Documentation of Storage of Goods 60
Annex 28: Procedure for Recording Process Deviations 61
Annex 29: Main Instructions on Recall Procedure 61
Annex 30: Procedure for Internal and External Communication 62
Annex 31: Form for Training Records 64

1. BACKGROUND

The "EU Food Safety Project" executed under Contract 2021/423-933 "Technical assistance to improve implementation of food safety standards and disease crisis preparedness" strives to support a faster social and institutional development of the Turkish Cypriot community (TCc) and a higher economic growth of its agri-food chain sector.

The project aims to achieve improved food safety, public health, animal health and protection of the environment, and to mitigate the impact of an imminent threat of potential exotic animal diseases.

This document was produced within the following project activity:

Prepare guidelines for stakeholders to complement the input delivered in specific trainings, workshops and other capacity building activities.

2. INTENDED AUDIENCE

The intended audience of these guidelines are business operators interested in Protected Designation of Origin (PDO) Halloumi/Hellim production.

3. AIM OF THE GUIDELINES

Protected Designation of Origin (PDO) is an EU quality scheme. More information about the EU quality policy is available on the **website of the European Commission**[1].

Halloumi/Hellim was granted PDO status in April 2021, meaning that the Halloumi/Hellim name can be used only for products made in Cyprus according to strict product specifications.

The Food Safety Project experts provide consultations to support food business operators interested in obtaining the PDO certificate. Assistance is being provided also to their milk suppliers and related feed producers.

The Food Safety Project prepared a set of documents to address the key elements of the Halloumi/Hellim PDO requirements, including the requirements that concern EU animal health and public health aspects, as to ensure the production of a safe PDO product throughout the whole food production chain.

These can be found in the form of different procedures outlined below. They are relevant for farms producing PDO compliant milk, entities distributing the milk, Halloumi/Hellim producers as well as producers of PDO compliant feed.

The guidelines are also available to the public on the project's Online Food Safety Platform **http://tccfoodsafetyproject.eu/**. All parties involved in the food and catering sector should find them a valuable tool in their day-to-day operations.

[1] https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/geographical-indications-and-quality-schemes-explained_en

4. WHAT IS PDO?

By definition the Protected Designation of Origin refers to quality or characteristics of the product which are essentially or exclusively due to its origin and all the steps of the production of the agricultural food or foodstuff have to take place in the region (the specified territory).

Halloumi/Hellim produced in Cyprus according to the product specification is now allowed to use the registered name. This means that the products which meet the requirements of the Halloumi/Hellim PDO product specifications can obtain the PDO certificate under this EU quality scheme.

The measures concerning EU sanitary and phyto-sanitary criteria, referred to in the Commission Implementing Decision (EU) 2021/586 - under *Conditions to be met before trade can take place* - are still required to be fulfilled for the Turkish Cypriot community to fully benefit from the EU quality scheme: only when those criteria would be met, the trade of PDO compliant Halloumi/Hellim across the Green Line would be enabled.

5. PDO STAKEHOLDERS AND PRODUCTION PROCESS

In the whole PDO Halloumi/Hellim production chain starting from the primary production until the production of PDO Halloumi/Hellim a lot of stakeholders have to ensure that the processes are in line with both PDO and public health requirements:

PRIMARY FEED PRODUCTION

- Farmers have to produce feed according to the Good Agricultural Practices to be free from pesticides and other contaminants.
- the local body in charge for 'animal husbandry' is responsible for the registration and control of the primary feed producers and for implementing a monitoring programme for pesticide residues and other contaminants in feed.

FEED PROCESSING AND RETAIL

- Feed Business Operators (including TÜK) have to comply with the feed safety legal requirements and the standards of Good Hygiene Practices, Good Manufacturing Practices and HACCP. Their role is to ensure that safe local feed is available for PDO eligible milk production and to ensure traceability of feed.
- the local body in charge for 'animal husbandry' is responsible for the registration and control of the feed business operators and for implementing a monitoring programme for pesticide residues and other contaminants in feed.

DAIRY COW, SHEEP AND GOAT FARMS

- Farmers have to comply with the animal health requirements such as Tuberculosis (TBC) and Brucella free status of the herd, biosecurity, traceability of animals, animal welfare. They need to take care about public health requirements such as traceability of own produced feed or purchased feed, use of veterinary medicinal products, milking hygiene, milk storage. They have to comply with PDO requirements on feeding and milking to produce PDO eligible milk for Halloumi/Hellim production.
- the local body in charge for 'veterinary services' has to register and control farms, implement animal health monitoring programmes and microbiological, veterinary medicinal and pesticide chemical contaminants control programme.
- the local body in charge for 'animal husbandry' controls feed used on the farms.

MILK TRANSPORT

- Food Business Operator (SÜTEK) has to comply with public health requirements (including GHP and HACCP) and ensure traceability of PDO eligible raw milk between the farm and the dairy factory.
- the local body in charge for 'veterinary services' registers and controls milk transporters.

MILK PROCESSING

- Dairy factories must comply with public health requirements including GHP, GMP and HACCP, and produce PDO Halloumi/Hellim according to the 'official' specification. They have to ensure the full traceability of the incoming ingredient and the final product.
- the local body in charge for 'veterinary services' has to approve and control dairy factories, implement monitoring programmes on microbiological agents and chemical contaminants.
- Büro Veritas controls and audits farms, milk transporters and dairy factories, giving attestation to PDO eligible farms and certification to PDO eligible dairy factories.

6. FEED PRODUCTION

WHAT IS REQUIRED FOR FARMERS PRODUCING THEIR OWN FEED OR PRODUCERS OF PRIMARY PLANT PRODUCTS FOR FEED?

- Follow the Good Agricultural Practices.
- Take care about the withdrawal time of pesticides used.
- Keep records on the use of pesticides, harvesting and dispatching/selling of feed to breeders (goat-sheep breeders and cow breeders) and feed business operators.

WHAT IS REQUIRED FOR FEED BUSINESS OPERATORS PRODUCING FEED FOR PDO FARMS?

- Get registered/approved under the relevant feed hygiene legal requirements (in line with the EU legal framework) and obtain operation permit.
- Get developed customized recipes.
- Get developed/implemented procedures for control of standards, packaging, and label of feed mixtures intended for PDO.
- Labels should indicate the exact content of each ingredient and its Cyprus origin Indicate the local feed rate labels of the feed mixtures or in the documents attached to them.
- Get developed/implemented procedures for control of mixture types produced and sold to breeders (goat-sheep breeders and cow breeders) with feeds originating from Cyprus.
- Keep a record of the mixture types to be used for Halloumi/Hellim in the total of mixtures produced for other purposes.
- Get developed/implemented procedure for checking the balance of PDO mixtures/feed and the tests done on the feed. Keep records on feed suppliers (name) including type, quantity/ quality, and origin of feed (e.g. invoices, delivery notes).
- Keep records/evidence (e.g. Invoices, delivery notes) confirming the quantities contained in the ingredients and their Cyprus origin.
- Keep records on the production and dispatching/selling of feed (e.g. delivery notes, invoices)
- Separate storage of feed for PDO producing breeds from feed for other species/breeds.

6.1. GOAT AND SHEEP PDO FEED

Feed supplements, cereals, including barley and maize, protein feed such as husked, partly decorticated soybean meal, products and by-products of various raw materials such as wheat bran, and inorganic substances, vitamins and micronutrients may be used for the production of PDO feed.

6.2. COW PDO FEED

The cow's PDO feed should consist of feed supplements containing mainly barley, maize, soya, and bran and inorganic substances, vitamins and micronutrients.

For more detailed information please check **Annex 1 – Guidelines for traceability of feed** and **Annex 2 - Example of feed labelling**.

7. MILK PRODUCTION

WHAT IS REQUIRED FOR A FARM TO BECOME ELIGIBLE FOR PDO MILK PRODUCTION?

Along the Halloumi/Hellim production chain specific requirements should be met by the relevant business operators on the different levels:

- feed milling (farm or feed establishment)
- primary production of raw milk (farm)
- milk collection and transport
- milk processing (dairy factory)

Eligible PDO animal breeds should be used for PDO milk production. The animals must be individually identified and registered. Herd management records should contain information regarding mating, birth, weaning.

Farmers need to have a system of record keeping for:

- results from tests on live animals
- veterinary drugs used in the farm
- other farms activities such as cleaning/hygiene, temperature control of raw milk, food safety parameters of raw milk, feed and feeding.

The raw milk should come from healthy milking animals free from diseases (brucellosis, tuberculosis) and in a good general state of health. Relevant records/ evidence for monitoring of these criteria are required.

Milk shall not be collected from sheep and goat in the first 5 days after giving birth and from cattle in the first 7 days after giving birth (colostrum).

The milk used for Halloumi/Hellim production shall meet the following criteria:

COW MILK	GOAT AND SHEEP MILK
plate count at 30°C ≤ 100,000 (geometric average of two months period with at least 2 samples/month)	plate count at 30°C ≤ 1,500,000 (geometric average of two months period with at least 2 samples/month)
somatic cell count ≤ 400,000 (geometric average of three months period with at least one sample/month)	

Relevant records/evidence for monitoring of the above criteria are required.

The raw milk should be free from antibiotics and other residues. Relevant records/evidence for monitoring of these criteria are required.

Proper refrigeration and cooling of milk during storage immediately after milking is required.

In case of daily milk collection milk must be cooled to not more than 8°C, and if milk is not collected daily - to not more than 6°C.

During transportation of milk the temperature should not exceed 10°C. Relevant records/evidence for monitoring of the above criteria is required.

Farmers must meet the requirements for feed used in farm animals' daily mixture.

7.1. WHAT IS REQUIRED FOR A FARM TO BECOME ELIGIBLE FOR PDO MILK PRODUCTION?

GOAT AND SHEEP DAILY FEED

In the diet of sheep and goats the set of coarse feed shall be of local production (green grass, hay, silage, straw and grazing of wild vegetation). As complementary feed can be used cereals, such as barley, maize, etc.; protein crops such as extracted partially peeled soybean meal; products and by-products of various raw materials, such as wheat bran; and finally minerals, vitamins and trace elements.

COW DAILY FEED

The ration of cows shall consist of coarse feed (green grass, hay, silage, and straw palm) of local production. The remainder of the ration shall consist of complementary feed, containing mainly barley, maize, soya, and bran and other protein feed, such as partially extracted peeled soybean meal; products and by-products of various raw materials, such as wheat bran and finally minerals; vitamins and trace elements.

Farmers who are preparing the mixtures on their own should keep records of the whole purchased feed (invoices, analyses, etc.).

Farmers who do not produce their own concentrate should feed their animals with PDO eligible feed.

Farmers producing and harvesting their own feed must have record on the harvesting of food. If the animals are grazing, records about grazing shall be available.

SUITABLE LOCAL BREEDS FOR PDO HALLOUMI / HELLİM PRODUCTION

- **SHEEP breeds:**

All local and other breeds including cross-breeds which are bred on the territory of Cyprus.

- **CATTLE breeds:**

All local and other breeds including cross-breeds which are bred on the territory of Cyprus.

7.2. GOOD DAIRY PRACTICE

The dairy farmers as primary producers in the supply chain must ensure that the milk is produced by healthy animals using management practices that are sustainable from an animal welfare, social, economic and environmental perspective.

To achieve this objective, dairy farmers should apply good practice in the following areas:

- animal health
- milking hygiene
- nutrition (feed and water)
- animal welfare

7.2.1. Animal Health Status

Animals that produce milk need to be healthy and an effective health care practice should be in place and respectively recorded.

VACCINATION

Vaccination is a useful tool to limit the impact of disease by increasing the immunity of the animal population to specific pathogens. Animal health bodies can provide dairy farmers with information about the specific vaccines which are recommended for their area. In some dairying regions, dairy farmers are required to vaccinate their stock against serious contagious diseases.

PREVENT ENTRY OF DISEASE ONTO THE FARM

Purchase animals only of known health status (both herd and individual animals) and control their introduction to the farm using quarantine, if indicated.

The most effective way to prevent the spread of infectious diseases is to keep a closed herd. This means that without quarantine no new animals shall enter the herd and previously resident animals shall not re-enter after they have left the herd. This is difficult to achieve in practice, so strict control of any animal introductions is essential. Increased risk of disease may also occur when animals share grazing or other facilities.

Prior to being introduced to the farm, all dairy herds and animals should be screened for diseases that are significant to their area of origin and new location.

All animals should have an identification system to enable trace back to their source (a birth to death identification system) and certification that details the health/disease status of animals and any appropriate tests, treatments, vaccinations or other procedures that have been or are being carried out.

Where the animals' health status is unknown, they should be kept under quarantine or separate to the existing animals for an appropriate length of time.

Introduced animals should be inspected on arrival and should be free of external parasites such as ticks. Sick animals should be rejected. It is good practice to consider treating all introduced animals for internal parasites on arrival.

Keep records of all animal movements to and from the farm.

Ensure animal transport on and off the farm does not introduce disease.

Monitor risks from adjoining land and neighbours and have secure boundaries.

Be aware of local (endemic) diseases and/or exotic diseases which have the potential to affect the health of the herd or flock, especially from neighbouring farms.

Contain animals appropriately to ensure there is no risk of disease spread between farms and within farms.

Where possible, limit access of people and wildlife to the farm.

People (and vehicles) visiting a number of farms may spread disease between the farms. Keep tanker/milk pick up access and public tracks clear of faecal contamination. Special attention shall be paid to the wheels since those will come inevitably in contact with the ground. Restrict access to an 'as needs' basis and put in place appropriate processes to minimize disease spread.

Visitors to the farm should wear clean protective clothing and clean, disinfected footwear if entering areas that pose a high risk of transferring disease onto or from the farm. Records of all visitors should be kept as appropriate. Disease can be spread both from and to humans and wildlife. Avoid visitor contact with animals unless necessary.

HAVE A VERMIN CONTROL PROGRAMME IN PLACE

Ensure that appropriate vermin controls are in place in all areas where vermin could breed, introduce disease and/or affect milk safety and quality. Vermin breeding sites should be eliminated, especially if those sites also harbour disease pathogens, such as manure heaps, livestock disposal sites etc. Vermin control measures may also be required in the milking shed, feed and water storages and animal housing areas. Vermin species vary geographically but can include indigenous animals, rodents, birds and insects.

ONLY USE CLEAN EQUIPMENT FROM A KNOWN SOURCE

Ensure all agricultural and veterinary equipment introduced on to the farm is clean and steps have been taken to prevent the introduction of disease. This may include asking questions about the history of where the equipment comes from and how it has been used. Take extra care with shared or borrowed equipment.

Use an identification system of all animals (from birth to death).

All dairy animals should be easily identifiable by all people who come in contact with them. The systems used should be permanent, allowing individual animals to be uniquely identified from birth to death (e.g. ear tagging, tattooing, and microchips).

Bovine animals must be identified by means of a conventional ear tag attached to each ear flap of the animal with a visible, legible and indelible display of the identification code. Ear tags must be applied on the establishment of birth. If approved by the local control body, one or both ear tags may be replaced by an electronic identifier.

Sheep and goats must be identified on the establishment of birth. Depending on the intended fate of the animal, there are two options:

- Animals moved directly to a slaughterhouse before the age of 12 months have to be identified by at least an ear tag or a pastern band, showing the registration number of the establishment of birth or the identification code of the animal.
- Animals intended to be kept for more than 12 months have to be individually identified by an ear tag with the identification code of the animal and by an electronic identification (e.g. injectable transponder, ruminant bolus, electronic ear tag, pastern band) approved by the local control body.

All identifications must show the codes in a visible, legible and indelible display. The identification has to be applied within 9 months from birth or when the animal leaves the establishment of birth.

Operators must transmit all births and deaths as well as all animal movements to the local bodies.

DEVELOP EFFECTIVE FARM HERD HEALTH PREVENTION PRACTICES

Farm's practices for the diagnosis, treatment, prevention and control of relevant animal diseases, including internal and external parasites is of utmost importance.

It is important to ensure a consistent approach to herd health, so all staff should be aware of and understand the farm's herd health programme.

All these measures/activities should be performed by veterinarians and appropriate contract for such service is required.

CHECK ANIMALS REGULARLY FOR DISEASES

Observe all animals regularly and use proven methods to aid in detection and accurate diagnosis of infectious disease. Some useful tools may include rectal thermometers, observations of animal behaviour and body condition, and examination of foremilk. Laboratory or other tests may be necessary to screen animals for disease. Herd and/or animal-level disease testing may also be available through statutory disease control programmes or milk collection/herd improvement centres.

Detailed breeding and reproductive records should be kept and animals observed at appropriate stages as many diseases are associated with reproduction.

Veterinary treatment of animals is crucial. Farms shall have a contract with a veterinary service provider with clearly described responsibilities. Veterinary service provider is usually responsible for:

- Setting up the disease control plan of the farm
- Perform health checks of the animal population
- Treat animals (including reproduction-biological treatments like synchronization of heat, artificial insemination, caesarean section etc)
- Document treatment of animals
- Prescribe veterinary medicinal products for treatment of animals

Since veterinarians can't be present all the time on the farm, trained personnel might carry out routine veterinary treatments and their administration under the responsibility of the veterinarian.

Clinical diseases should be investigated to determine the underlying cause(s) so that animals can be treated and further cases prevented. Regular management practices such as hoof care programmes can reduce the incidence of lameness.

Sick animals should be treated quickly and in an appropriate way.

Treat all disease, injuries and poor health by proven methods after accurate diagnosis. Treat diseased animals appropriately to minimize the prevalence of infection and the source of pathogens.

KEEP SICK ANIMALS ISOLATED

Where possible and if indicated, keep sick animals isolated on the farm to minimize the spread of contagious disease. Provide separate facilities and/or milk sick animals last. Prompt treatment can limit the spread of infectious agents. Clean and disinfect equipment after it has been in contact with sick animals and ensure people coming into contact with these animals take precautions to avoid infections.

SEPARATE MILK FROM SICK ANIMALS AND ANIMALS UNDER TREATMENT

Follow appropriate procedures to separate milk from sick animals and animals under treatment and after treatment until the withdrawal period is expired. This milk is not suitable for human consumption and if stored on farm should be clearly labelled as such. Clean milking equipment and utensils thoroughly to avoid cross contamination. If treated or sick animals are milked with the same milking equipment these shall be milked as the last.

KEEP WRITTEN RECORDS OF ALL TREATMENTS AND IDENTIFY TREATED ANIMALS PROPERLY

It is important that staff, veterinarians and others involved with handling dairy animals on the farm know what treatments have been given to which animals. Put in place an appropriate system to readily identify treated animals, and record appropriate details in accordance with local legal requirements and to manage withdrawal periods for milk and meat.

MANAGE ANIMAL DISEASES THAT CAN AFFECT PUBLIC HEALTH (ZOONOSES)

Follow the legal requirements to control zoonoses.

Keep the diseases of public health significance at a level in animal populations that is not hazardous to people. Avoid direct transmission to people through appropriate animal management and hygienic practices. Ensure the safe disposal of animal waste and carcases. Prevent the contamination of milk with faeces and urine or other animal wastes. Do not use milk from sick animals for human consumption. Manage the risks posed by drinking raw milk from farms.

USE ALL CHEMICALS AND VETERINARY MEDICINES AS ORDERED

Use only chemicals that have been registered for use in dairy production by the relevant body. Use chemicals according to prescription, calculate dosages carefully and observe the appropriate withholding period.

Be aware of chemicals that can leave residues in milk. These may include detergents, teat disinfectants, dairy sanitisers, anti-parasitics, antibiotics, herbicides, pesticides and fungicides.

Dairy farmers should:

- be trained by the service providing veterinarian how to use veterinary medicinal products for routine treatments.
- avoid treatment of lactating animals with veterinary products that are not recommended for treatment of animals producing milk supplied for processing or otherwise used for human consumption.
- read the label as it will contain all the information about the legal and safe use of the chemical.
- follow the advice given on the label and any chemical data sheet or risk assessment.
- observe the specified withdrawal periods.

Use only approved veterinary medicines, at the recommended dose according to the label directions, or as prescribed or advised by a veterinarian. Relevant withholding periods must be observed.

Store chemicals and veterinary medicines securely and dispose of them responsibly.

Store chemicals and veterinary medicines securely to ensure they are not used inappropriately or do not unintentionally contaminate milk and feed. Check and observe product expiry dates. Chemicals and their containers should also be disposed of in a way that will not cause contamination to animals or the farm environment.

For daily administration to flowing forms might be used:

- Annex 3: Veterinary records on diseased animals
- Annex 4: Form for veterinary treatments
- Annex 5: Form for recording withdrawn milk
- Annex 6: Self-assessment procedure for farms
- Annex 7: From for recording health checks of animals
- Annex 19: From for visitors' logbook
- Annex 31: Form for training records

7.2.2. Milking and Milk Hygiene

Ensure milking routines do not injure the animals or introduce contaminants into milk.

IDENTIFY INDIVIDUAL ANIMALS THAT REQUIRE SPECIAL MILKING MANAGEMENT

Individual animals should be easily identifiable by all people who come in contact with them. The system used should be permanent, allowing individual animals to be identified from birth to death. Additional temporary identification systems should be in place on farms to manage animals that require special handling at milking, such as treated or diseased animals, or animals producing milk that is not suitable for human consumption.

ENSURE APPROPRIATE UDDER PREPARATION FOR MILKING

Clean and dry teats before milking. Avoid washing of the whole udder, clean the teats with a solution fit for this purpose (pre-milking teat dipping solutions). Check the udder and teats for any abnormalities which may indicate clinical mastitis. The foremilk shall be extracted and checked for abnormalities before each animal is milked. This may be a regulatory or contractual requirement for dairy animals in some countries.

MILK ANIMALS REGULARLY USING CONSISTENT MILKING TECHNIQUES

Implement regular milking times and routines. Ensure good milking technique is consistently applied. Incorrect or variable milking techniques can result in a higher mastitis risk and injury to the animal.

The correct technique for machine milking is to:

- prepare animals properly before milking (preferably by using pre-milking teat disinfectant and drying with disposable towels)
- attach the cups to clean, dry teats
- avoid unnecessary air ingress at cup attachment
- avoid over milking
- remove cups gently
- When necessary, apply teat disinfectant to each teat after milking according to local recommendations and legal requirements. Post-milking teat dippers are created to build up a protective layer on the teat to prevent intrusion of bacteria through the opened aperture of the teat (it closes approximately 1.5 hours after the milking)
- Segregate milk taken from sick or treated animals for appropriate disposal
- Maintain milking equipment regularly, cups shall be changed according to the frequency advised by the supplier

Animals whose milk is unfit for human consumption should be milked last or with a separate bucket or system. Store or discard abnormal milk in a manner appropriate to the risk posed to people, animals and the environment.

MASTITIS CONTROL

Mastitis is the name given to udder inflammation. Alongside a change in the milk characteristics, classical inflammation symptoms such as reddening, swelling, pain, a hot udder and even disturbance of general condition mean that clinical or acute mastitis is easily detected. Far more difficult to recognise, because of the lack of external symptoms, but just as important for stock management, is the diagnosis of sub-clinical mastitis. This is because a cow which already has a sub-clinical mastitis may easily develop clinical mastitis, e.g. if the immune system is weakened.

Cell count is important in mastitis diagnosis. If the cell count is analysed and assessed, both the lactation state and age of the animal must be considered. A cell count of 200,000/ml towards the end of lactation may well be regarded as normal for an older cow. However, if the same cell count were detected in a heifer at the beginning of lactation, it would indicate unspecific, or in the presence of pathogens, a clear case of mastitis.

A cell count determination can provide valuable evidence of any problems that exist. A start point is the number of cells determined by the milk control association. However more accurate results based on each udder quarter are required.

The most common way to check milk is to check foremilk colour and consistency. For this purpose cups with black coloured bottom are used where changes in the colour of milk and flocks might be visible.

A simple test, which can be quickly carried out and which is very accurate, is the California Mastitis Test, or Schalm Test. Cell counts of 100,000/ml and above can be detected.

CALIFORNIA MASTITIS TEST OR SCHALM TEST:

Test Result: -, +, ++, +++, ++++
- < 100,000 cells /ml, no clotting, liquid consistency. Samples can easily be poured out into small portions.
+ Approx. 100,000- 300,000 cell/ml. slight clotting. Samples can easily be poured out into small portions.
++ Approx. 300,000- 500,000 cell/ml. clotting with slight gel formation. More difficult to pour out into portions.
+++ Approx. 500,000- 1.5 million cell/ml. heavy clotting with definite gel formation. Pouring out into portions becomes increasingly difficult.
++++ More than 1.5 million cell/ml. heavy clotting with definite gel formation. Pouring out into portions is no longer possible.

DIAGNOSIS BY PATHOGEN DETECTION

If udder health is assessed using the evidence of pathogens, then microbiological investigation by udder quarter makes sense. For a reliable analysis, extreme care is required. Contamination of the sample by dirt and microbes from the udder skin or from the hands of the person taking the sample must be avoided at all costs. The microbiological diagnosis requires a sample of milk taken under sterile conditions and milked into a sterile test tube.

Procedure:

- Pre-milking into a pre-milking cup.
- Cleaning and disinfection of each teat, using one alcohol swab (70%) per teat for approx. 15 seconds.
- Clean the furthest away teats first.
- Where heavily soiled, clean and dry off the teats beforehand.
- Person taking the sample: with clean hands without any cuts or wearing gloves.
- Take the first samples from the closest teats.
- Do not open sterile sample test tubes until immediately before taking the sample and hold them horizontally.
- If possible, fill the tube with a single squeeze, the teat must not come into contact with the test tube.
- An examination must be carried out as quickly as possible, cooling or some method of preservation may be necessary.

Diagnosis of pathogens can help to choose the right methods for herd health management and the right antibiotics for treatment. The goal of the pathogen detection is usually to develop a profile of the mastitis pathogens (which are the most frequent pathogens) and check the antibiogram for the treatment and not to select individual treatment methodology for sick cows. However, it can be used for individual decisions in complicated cases when animals don't react to treatment or have persistent problems with mastitis.

Mastitis pathogens can be divided into 2 groups: environmental pathogens and contagious pathogens.

	Cow related = contagious pathogens	Environment related pathogens
When does the infection occur?	During milking	Between milking sessions
How does the infection occur?	Milker Unclean udder cloths Cluster	"Environment" and byre climate Bedding, feaces Walkway surfaces
Outbreak of disease	During the whole lactation period	Early lactation periods Periods with adverse environmental conditions like winter period in TCc
Symptoms	High cell count Reduced milk yield Periodically recurring mastitis *(Staphylococcus aureus)*	Often clinical mastitis Disturbance in general state of health Especially with coliform bacteria
Duration of disease	Months to years Often chronic carriers *(Staphylococcus aureus)*	Mostly cured within a month with appropriate treatment, or spontaneously
Prophylaxis	Observe milking sequence Use of pre- and post-milking disinfecting dips Removal of carrier animals Vitamin E, selenium, minerals Healthy and intact udder skin	Hygiene measures Avoidance of stress Matching feed to lactation Careful cleaning before milking Barrier dips after milking Avoid the cows to lay down right after milking by providing fresh feed
Most frequent pathogens	*Staphylococcus aureus* *Streptococcus agalactiae* *Streptococcus dysgalactiae* *Mycoplasma bovis* *Corynebacterium bovis*	*Streptococcus uberis* *Coliforms, e.g. Escherichia coli* *Klebsiella* *Coagulase negative staphylococci (CNS/KNS)*

ENSURE MILKING EQUIPMENT IS CORRECTLY INSTALLED AND MAINTAINED

Manufacturers' and local recommendations should be followed for construction, installation, performance and maintenance of the equipment used for milking. Inspect and replace perishable components if evidence of wear is found. Materials used for milking equipment that come into contact with milk and with cleaning and disinfecting fluids should be made from adequately resistant materials and should not impart a taint to milk.

Follow the manufacturers' instructions when using cleaning and disinfecting agents on milking equipment, including any requirements to rinse following application. Use only cleaning and disinfecting agents approved for use by the relevant body. These chemicals should be used in a way that ensures they do not have an adverse effect on the milk or milking equipment. Store all chemicals, other than those in routine use, in a lockable area away from the milk storage area.

ENSURE A SUFFICIENT SUPPLY OF CLEAN WATER

A sufficient supply of clean water should be available for milking operations, for cleaning the equipment that comes into contact with milk and for cleaning the milking area.

The quality of the water should be suitable for its intended use. Standards regarding the quality of water used in milk production are mandated in many countries, including the use of potable water in cleaning surfaces that come into contact with milk.

ENSURE MILKING IS CARRIED OUT UNDER HYGIENIC CONDITIONS

Ensure housing environment is clean at all times. A high standard of cleanliness should be maintained at all times in housing areas to decrease dirtiness of the udder and so protect udder health.

The housing area should:

- be designed to provide good drainage and ventilation and to avoid animal injury
- be of suitable size and designed to cater for the size of the animal and the herd
- have adequate loose bedding which is maintained in a hygienic condition

All stalls and beds should be kept clean and dry (eg by replacing the bedding frequently). Regularly clean or scrape passageways to remove manure.

ENSURE MILKING AREA IS KEPT CLEAN

The milking area should be designed to allow it to be kept clean and tidy. It should:

- be easy to clean
- have a clean water supply
- have waste handling facilities
- have sufficient temperature regulation, ventilation and light

The design milking area must minimise the risk of contamination from any source, including dust, flies, birds or other animals. Open parlours can be accepted in situations where hygiene risks are minimised, and very high standards of management are maintained. They are not permitted if birds gain access or where there is excessive dust contamination from adjacent areas. A parlour that can be properly sealed off from other buildings is the best practice.

Floors should be impervious to water and free draining. Sufficient fall from the area under the udder is important to ensure this area can be kept clean and free from pooling during milking.

Doors and walls should be smooth, impervious and easy to clean. For walls, good quality, smooth cement rendering is adequate. Alternatives are available including sealed plastic cladding, smooth concrete panels or direct bonding fibreglass.

Suitable facilities must be available near the place of milking to enable operators milking and handling milk to wash their hands and arms.

Roof or loft floors should be made of dust proof sheet material and be easy to clean. Any false ceiling should be of an impervious material and steps must be taken to prevent vermin infestation in the void.

Sufficient ventilation is required to provide clean air and avoid condensation.

Artificial lighting is essential to provide good visibility for all milking and cleaning operations. Ideally strip lights with shatterproof and waterproof diffusers.

All drainage should discharge to a suitable drainage system.

ENSURE THE MILKERS FOLLOW BASIC HYGIENE RULES

The milker should:

- wear suitable and clean working clothes
- keep hands and arms clean especially when milking
- cover cuts or wounds
- not have any infectious disease transmissible via milk

ENSURE MILKING EQUIPMENT IS CLEANED AND WHEN NECESSARY, DISINFECTED AFTER EACH MILKING

Establish a routine to ensure milking equipment is clean before each use. If mobile milking equipment is used, this may mean cleaning between each use.

Use chemicals approved for the cleaning and/or disinfecting of milking equipment. Use water of suitable quality heated to the required temperature. Milk contact surfaces should be disinfected as required and in accordance with local recommendations and legal requirements.

ENSURE MILK IS COOLED OR DELIVERED FOR PROCESSING WITHIN THE SPECIFIED TIME

Cool milk as soon as possible after milking to the required storage temperature and within the specified time. Cooling times and storage temperatures should conform to limits set by the relevant body.

- Cool milk immediately to at least 8°C.
- Cool milk at least to 6°C if the milk is not to be collected within one day after milking.

Milk must be protected from contamination during transfer and storage.

Bulk tanks must be cleaned and disinfected after each milk collection and kept in good condition.

ENSURE MILK STORAGE AREA IS CLEAN AND TIDY

Milk should be stored away from the milking area. The milk storage area should:

- be clean and clear of accumulated rubbish, any products or chemical substances not in constant use and any feedstuffs
- have hand washing and drying facilities
- be easy to clean and have pest control practices in place

ENSURE MILK STORAGE EQUIPMENT IS ADEQUATE TO HOLD MILK AT THE SPECIFIED TEMPERATURE

The storage equipment should be capable of holding milk at the required temperature until collection and be constructed of materials that do not taint the milk.

Bulk tanks should be built to recognized standards and milk refrigeration systems should have a regular maintenance and service programme to prevent breakdowns. The bulk tank should be equipped with a thermometer to check the temperature of the milk and appropriate records kept of storage temperatures. Ensure that all the equipment is working properly.

ENSURE MILK STORAGE EQUIPMENT IS CLEANED AND WHEN NECESSARY, SANITISED AFTER EACH MILK COLLECTION

To ensure milk storage equipment is clean before use, clean and, when necessary, sanitise it after each milk collection. Milk contact surfaces should be sanitised as required in accordance with local recommendations and legal requirements.

ENSURE UNOBSTRUCTED ACCESS FOR BULK MILK COLLECTION

Provide unobstructed access to the milk storage area to enable the safe collection of milk. Access to the milk collection areas should be free of animal pathways, mud and other potential contaminants.

KEY SOURCES OF MILK CONTAMINATION

- Faeces, dirt on the animals, especially teats, udders and tails
- Bacteria, from poor milking practices, dirty hands, inadequately cleaned and disinfected equipment (including bulk milk tanks), and failure to clean and disinfect teats prior to milking.
- Failure to detect abnormal milk (mastitis pathogens, blood and clots).
- Foreign bodies, especially from perished components in milking machines and bulk tanks, dust, bedding materials, dung, insects and animal hair.
- Chemicals, metals, organics, etc., from veterinary product residues, cleaning chemicals and use of non-food grade equipment.

CHECK SOMATIC CELL COUNT AND TOTAL PLATE COUNT RESULTS OF RAW MILK

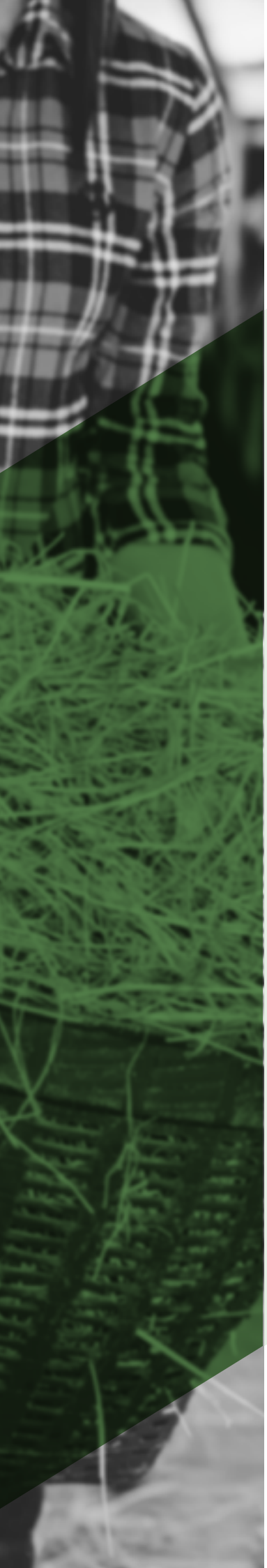
Somatic cell count (SCC) data reflect udder health status of the animals. There is a legal limit defined for cow milk, but not for sheep and goat milk, but trend analysis of SCC data shows changed in the udder health status of small ruminants too. If SCC is high more attention has to be paid to control of foremilk, it might be necessary to check all animals with California Mastitis Test (CMT) to identify animals with subclinical mastitis.

Total plate count (TPC) reflects the hygiene of the milking, cleaning of the milking equipment, cleaning of the milk storage equipment and cooling of milk. If TPC data are increasing farmer shall check whether there are problems in pre-milking teat cleaning, maintenance and cleaning of the equipment or storage of the raw milk.

CHECK RESIDUES IN RAW MILK

Milk produced for food processing shall be free of any contamination endangering human health. Most important contaminants are:

- Residues of veterinary medicinal products (originating of treatments of animals and use milk or meat before expiring of the withdrawal period)
- Residues of chemicals (originating from cleaning and improper rinsing of equipment or rooms)
- Residues of pesticides (originating from feed harvested before the end of the withdrawal period)
- Residues of mycotoxins (originating from feed contaminated with moulds)
- Microbiological contamination (arising from non-hygienic milking or milking of sick animals)



Farmers shall take care to minimize the presence of these residues in the milk.

Presence of chemicals can be avoided by proper cleaning and rinsing of equipment and rooms. Introduction of contaminated feed to the farm can be prevented by controlling documentary evidence of the purchased feed (seller shall certify that feed is free of contamination of pesticide residues and mycotoxins).

Residues of veterinary medicinal products can be managed by keeping the rules for treatment of animals, isolation of sick animals, separate milking under treatment and withdrawal period. Presence of veterinary drug residues shall be controlled by regular rapid test of bulk tank milk for antibiotic residues.

Microbiological contamination can be brought under control by proper milking and milk hygiene.

For daily administration the flowing forms might be used:

- Annex 13: Form for list of contacts
- Annex 14: From for milk production records
- Annex 15: Daily farm milk level production record
- Annex 16: Form for recording chemicals used
- Annex 17: From for recording milk temperature during storage

7.2.3. Feed and Water

FEED/FEEDING AND WATER

Secure feed and water supplies from sustainable sources.

Utilise appropriate feeding and watering methods and infrastructure to ensure all livestock have adequate access.

Implement sustainable nutrient, irrigation and pest management practices when growing feed.

Many farming systems rely on home grown feed for their livestock. Implementing good dairy farming practice includes managing the flow of nutrients on the farm, including the appropriate use of effluent and fertilisers for growing feed. Finite resources such as water for irrigation must also be managed sustainably. Implementing integrated pest management strategies can reduce chemical use.

Where possible, dairy farmers should consider sourcing farm inputs such as feed, water, fertiliser and energy from suppliers adopting sustainable practices, and so reduce the environmental impact of their own enterprise.

ENSURE ANIMAL FEED AND WATER ARE OF SUITABLE QUANTITY AND QUALITY

Dairy animals should be provided with sufficient feed and water daily, according to their physiological needs. The quality and quantity of the feed, including appropriate fibre, should reflect the animal's age, body weight, stage of lactation, production level, growth, pregnancy, activity and climate.

Sufficient space and time need to be given for each animal to get access to feed and water.

Ensure the feed fed to dairy animals is fit for purpose and will not negatively impact the quality or safety of their milk.

Dairy farmers should ensure that the feed fed to dairy livestock does not contain chemical residues, toxins or other contaminants that pose a risk to animal health or the safety or quality of milk or meat derived from these animals. This can be achieved by carefully following the label directions of agricultural chemicals used on pastures and crops being grown for stock feed on the farm. Assurance about previous chemical treatments and the feed's suitability as a stock feed should be sought from off-farm suppliers.

Fence off or restrict access to areas where contaminated feed or toxic plants may be consumed by dairy animals. Inspect feed for signs of contamination or spoilage prior to feeding.

Ensure suitable quality water is provided and the supply is regularly checked and maintained.

Fence stock water supplies to protect them from unintentional contamination. Water supplies should be of suitable quality and free of excrement.

Many contaminants can enter water supplies and threaten the health or safety of people, livestock and the milking equipment rinsed with the contaminated water. The most common contaminants include pathogenic microorganisms and their toxins, as well as toxic chemicals such as pesticides, petroleum, solvents and nitrates.

Contact the relevant local bodies and have the water tested if there are any concerns about the suitability of the water for animals to drink.

USE DIFFERENT EQUIPMENT FOR HANDLING CHEMICALS AND FEED STUFFS

Never mix agricultural chemicals and/or veterinary chemicals in equipment or facilities used to handle feed or water for dairy livestock. Residues can remain on equipment or cross contamination can occur via spills, air dispersal, back-siphoning effects etc.

Ensure chemicals are used appropriately on pastures and forage crops and observe withholding periods.

Maintain stringent paddock records of all chemical applications to crops and pastures, and ensure grazing withholding periods are closely observed. Always follow the label for application rates and withholding times before allowing animal's access to a treated field for grazing or forage harvesting. Always follow regulated processes for spray technologies.

Check pasture for signs of pesticide drift. Look for signs of herbicide damage on forage plants. If signs are present, investigate further before allowing animals to graze.

Be aware of the potential for spray drift when applying agricultural chemicals to pastures and crops. Take adequate precautions when allowing stock to drink the water after spray applications.

Find out about the past and present use of chemicals on your farm and neighbouring properties as spray drift may be a potential source of residues. When buying fodder or land, always obtain information on the paddock's previous history of agricultural chemical use and/or conduct a soil or plant test if residues are suspected.

Only use approved chemicals for treatment of animal feeds or components of animal feeds and observe withholding periods.

Only chemicals approved for use in dairy operations should be used.

Chemicals should be managed in a manner that avoids their accidental introduction into the feed and water and, as a result, into milk.

Use chemicals in accordance with manufacturers' recommendations. Check labels of all chemicals that are to be used around, on or in feeds or pastures for compatibility with food-producing animals, withholding requirements for milk, and proper application rates and concentration of products.

Withholding periods may also apply to pastures, forage crops and stored grains if they have been treated with an agricultural chemical. Different withholding periods may apply if the crop is also intended for human consumption.

CONTROL STORAGE CONDITIONS OF FEED

Separate feeds intended for different species.

Ensure appropriate storage conditions to avoid feed spoilage or contamination.

Ensure animals are not able to come into contact with contaminants in areas where these products are stored and mixed. These areas should be well ventilated as toxic fumes may be given off.

Ensure that feed is protected from contaminants. Store and handle pesticides, treated seeds, medicated feed and fertilizers properly. Store herbicides separately from other agricultural chemicals, fertilizers and seeds. Provide an appropriate vermin control programme for stored feed.

Hay and dry feeds should be protected from a moist environment. Silage and other fermented crops should be kept under sealed conditions.

Reject mouldy or sub-standard feed. Avoid feeding any mouldy feed to dairy animals. A wide range of feeds can contain poisonous fungal toxins that can be transferred to milk, particularly if they have not been stored correctly. Monitor feed for other gross contaminants such as plant or animal matter, metal, plastics, string and other undesirable items.

ENSURE THE TRACEABILITY OF FEEDSTUFFS BROUGHT ON TO THE FARM

Where possible, source animal feed from suppliers having an approved quality assurance programme in place. If you buy in feed, ensure the feed supplier has an assurance programme in place, can monitor appropriate residues and diseases and can trace the ingredients used back to their source. Ask for a relevant vendor declaration.

Keep records of all feed or feed ingredients received on the farm.

Have an appropriate system in place to record and trace all feed or feed ingredients received onto the farm. Request a vendor declaration and/or a written consignment note with each feed delivery. Make sure you can identify and trace all treatments applied to feeds on-farm (including crop and grain treatments).

ENSURE TRACEABILITY OF OWN PRODUCED FEED AND GRAZING OF ANIMALS

If the farm produces its own feed, good agricultural practices have to be followed (key issues: use plant protection products as limited, as possible, record the use of such products and start harvesting only after the withdrawal period is passed). The amount of the feed harvested must be recorded.

If weather conditions make it possible animals should go on pasture since it also improves health conditions of animals. The farmer shall keep record about the grazing of animals.

For daily administration the following forms might be used:

- Annex 8: Production record for feed
- Annex 9: Form for feed purchase records
- Annex 10: Form for feeding records
- Annex 11: Form for feed supplier list
- Annex 12: From for recording grazing
- Annex 18: Form for water monitoring

8. MILK COLLECTION AND TRANSPORTATION

The PDO eligible milk will be carried out by SÜTEK in distinct dedicated trucks which are registered and inspected by the local bodies. If the trucks are owned by other persons/company, a contract has to be signed by SÜTEK and the owner of the truck including the responsibilities of the parties.

The transporter as food business operator shall be registered for the collection and transport of PDO eligible milk.

8.1 COLLECTING MILK FROM PDO ELIGIBLE FARMS

PDO eligible milk can be only collected from PDO eligible farms. The transporter needs to verify that the farm delivering the raw milk is registered as a PDO eligible farm. PDO eligible milk from different species can be transported by the same truck but in different compartments. Prior to loading the PDO milk, the transporter should ensure that only PDO eligible milk is collected and that cows' milk is stored separately from sheep/goats' milk in the separated tanks. If the milk of cows and sheep/goat are mixed on the farm the milk shall be treated as cow only milk.

Prior to the collection, the raw milk shall be checked at least for the following criteria:

- Temperature (if collected daily 8°C, if collection is not done every day 6°C), for every consignment)
- Organoleptic properties (colour and smell) for every consignment
- Presence of residues of antibiotics (by suitable rapid test); frequency shall be determined risk-based

If any of the criteria shows non-compliance, milk shall not be taken for transport. Other tests (like pH, freezing point, etc.) might be carried out based on the decision of the Food Business Operator (FBO).

The transporter shall verify prior to loading the truck that hygiene standards for milk storage are followed and that total plate count and somatic cell count limits are respected. (for details please see chapter 7.2.2 on milking and milk storage hygiene)

Milk samples shall be taken and stored for further laboratory analyses in case of disputes, the samples shall be stored until arrival to the laboratory below 10°C. Milk samples shall be taken and kept separately from each different collection farm.

All relevant data: time/date of collection, quantity, temperature of milk and type of the milk (species and PDO eligibility) including the hygiene requirements shall be recorded by the transporter. The routing shall only include farms included in the registered list of PDO eligible farms. All PDO eligible milk should fulfil temperature requirements during storage at farm and during transport.

Drivers shall be regularly trained for procedures carried out during loading, transport, unloading and cleaning. Personnel involved in transport of milk should:

- wear suitable and clean working clothes
- keep hands clean especially at loading and unloading of raw milk
- cover cuts or wounds
- not have any infectious disease transmissible via milk

8.2 TRANSPORTATION OF MILK

During the transport the temperature of raw milk shall not exceed 10°C. Attention must be paid to the possible contamination of milk, the lids of the ventils shall be well maintained to prevent the entry of dirt into the tank. If the truck needs to stop because of technical issues and the milk consignment needs to be checked, the driver needs to take care to avoid contamination when opening the lids of the tanks.

8.3 DELIVERY OF MILK

At arrival, the dairy factory verifies the transport documents, temperature records and actual temperature of raw milk and takes a sample of milk to verify the absence of antibiotics and other residues in milk. If the dairy plant detects non-compliances in the transport process, the temperature of the raw milk or presence of residues in milk, the consignment has to be rejected.

After loading the milk from the farm and after unloading and reception of the milk, the transporter shall issue a collection document and a delivery document with all relevant data for full traceability of the milk. After unloading, the trucks must be cleaned by using CIP (cleaning in place) procedure. The effectiveness of cleaning and rinsing shall be verified by the following tests:

- Samples taken for hygiene status of the cleaned surfaces (inside of the milk tank, valves etc) for detection of remaining bacteria; frequency shall be risk-based determined
- Samples from rinsing water at the end of the rinsing procedure for absence of detergents/disinfectants; frequency shall be risk-based determined

For more information on traceability related to milk transport please see Annex 20 - Guidelines on traceability for milk transporters.

9. MILK PROCESSING

Food Business Operators running dairies in the northern part of Cyprus have to meet the PDO requirements and the food safety standards of the European Union, as well the TCc legal texts on general hygiene requirements and specific hygiene requirements.

9.1 MAIN REQUIREMENTS FOR PDO HALLOUMI/HELLİM

PDO products represent the excellence of European agricultural food production, and are the result of a unique combination of human and environmental factors that are characteristic of a specific territory.

PDO quality or characteristics are essentially or exclusively due to the product's origin and all the steps of the production of the agricultural food or foodstuff have to take place in the region (specified territory).

The proportion of goat or sheep milk in the milk used for PDO Halloumi/Hellim production must exceed 50%.

A transitional period is applied till 2024: from February to August the minimum rate of goat or sheep milk has to be 25% and from September to January 10%.

Cow milk used for Halloumi/Hellim shall meet the following criteria:

- Plate count at 30°C: ≤ 100,000 (geometric average of two months period with at least 2 samples/month)
- Somatic cell count: ≤ 400,000 (geometric average of three months period with at least one sample/month)

Goat and sheep milk used for Halloumi/Hellim shall meet the following criteria:

- Plate count at 30°C: ≤ 1,500,000 (geometric average of two months period with at least 2 samples/month)

Milk should be free of residues of veterinary medicinal products and other chemical contaminants.

To ensure the production of Halloumi/Hellim a highly effective HACCP system shall be implemented.

Pasteurization of the raw milk is optional. Heat treatment of the PDO Halloumi/Hellim by cooking and control of antibiotic residues shall be operated and documented.

Laboratory tests shall be carried out to prove the effectiveness of the HACCP system.

Halloumi / Hellim shall meet the standard specifications:

- Halloumi/Hellim weight can be between 150-1200 grams and it shall have a rectangular or semi-circular shape.
- **FRESH HALLOUMI/HELLİM:** Maximum moisture content 52%, minimum fat content 43% (in dry weight) and maximum salt content 3%.
- **MATURE HALLOUMI/HELLİM:** Maximum moisture content 37%, minimum fat content 40% (in dry weight), maximum salt content 6%, and acidity max. 1.2% (lactic acid in dry weight).

The establishment has to operate an effective traceability system to prove that Halloumi/Hellim is produced only from PDO milk and consists of the right proportion of goat or sheep milk.

9.2 RECEPTION OF RAW MILK

At the reception of raw milk transport documentation shall be checked at least for the following:

- the milk is coming from registered PDO eligible farms
- the amount of milk delivered
- the species of milk production
- the temperature of milk during the transport

Prior to unloading the milk at least the following criteria have to be checked:

- presence of residues of antibiotics (by rapid test) for each consignment
- temperature of the milk delivered
- species producing the milk (presence of cow milk in sheep/goat milk consignments); frequency shall be risk-based determined

Other parameters (fat content, protein content, pH, freezing point, pH etc.) can be checked based on the decision of the FBO.

Other ingredients or packaging material must be checked for conformity with legal requirements and special requirements of the individual dairy plant.

For dried mint we advise to ask for a certification from the seller that the mint is free of pesticide residues and ready to use for food production.

Primary packaging material shall be fit for use as packaging material getting in direct contact with food which has to be certified by the supplier and proven by regular laboratory tests.

For daily administration the following forms might be used:

- Annex 24: Procedure for receiving incoming goods
- Annex 25: Form for external supplier's approval
- Annex 26: Form for approved external service supplier list

9.3 SEPARATION OF PRODUCTION, TRACEABILITY

PDO eligible milk shall be stored separately from non PDO eligible milk. PDO eligible milk shall be stored in dedicated milk tanks (the tanks have to be identifiable) prior to further processing. It's not necessary to store PDO sheep, goat and cow milk separately, but attention shall be paid so that the ratio of sheep/goat milk exceeds the minimum ratio defined by the specification for the whole lot of milk stored in the tank. If cow milk is stored separately from sheep/goat milk, the proportion of sheep/goat milk used for each production lot shall exceed the minimum the ratio defined.

The whole process of PDO Halloumi/Hellim production shall be separated (at least in time) from other conventional dairy products. During the processing no other product shall be produced in the same line of production except the production of nor (anari cheese) as by-product of heat treatment of whey extracted from the curd.

All ingredients and packaging material must be traced back to the supplier. Internal traceability system shall be set up to ensure that all ingredients of intermediary or final products can be reliably defined. All ingredients, packaging material and intermediary products have to be labelled to ensure identification of batches. All outgoing product batches need to be tracked for a possible recall procedure.

For more detailed information please see:

- Annex 21: Baseline instructions on traceability
- Annex 22: Detailed description of the traceability system
- Annex 23: Simulation exercise for internal traceability check
- Annex 24: Procedure for receiving incoming goods
- Annex 28: Procedure for recording process deviations
- Annex 29: Main instructions on recall procedure
- Annex 30: Procedure for internal and external communication

For regular administration activities the following form might be used:

- Annex 24: Procedure for receiving incoming goods
- Annex 25: Form for external supplier's approval
- Annex 26: Form for approved external service supplier list
- Annex 27: Form for documentation of storage of goods

9.4 PASTEURIZATION

The raw milk used for the production of PDO Halloumi/Hellim can be pasteurized. The pasteurization processes are exactly described in the Commission implementing decision 2021/586 such as:

- UHT treatment at not less than 135°C with suitable holding time
- HTST treatment at 72°C for 15 seconds applied twice for milk with pH equal to or greater than 7.0 achieving, where applicable, a negative reaction to alkaline phosphatase test applied immediately after heat treatment
- HTST treatment of milk with a pH below 7.0
- HTST treatment combined with another physical treatment such as lowering the pH below 6 for one hour or desiccation

9.5 PDO HALLOUMI/HELLİM PRODUCTION PROCESS

The production process is not fully described in the specification, but some steps are defined and have to be followed.

Raw milk might be pasteurized or used without heat treatment. After the optional pasteurization, the milk is cooled down and rennet is added to the milk. It is not allowed to use pig rennet for the production of PDO Halloumi/Hellim.

After coagulation the curd is cut and reheated to 40°C, placed in baskets or suitable molds to be pressed to remove whey. The whey is heated to about 80°C to produce nor (anari cheese), the deproteinated whey is used for the further steps of the process.

The whey and the pressed curd are heated to a temperature above 90°C for at least 30 minutes (cooking).

The Halloumi/Hellim is removed after cooking from the whey and optionally salted on the surface. Fresh mint leaves or dry mint that can be mixed with the salt shall be also added during salting or during packaging.

The Halloumi/Hellim is optionally folded and cooled and put into containers to which brine is added. The fresh Halloumi/Hellim stays in the brine for 8 hours - 3 days. The mature Halloumi/Hellim stays in the brine for at least 40 days at the temperature of 15-20°C.

The whey for cooking shall be originated from PDO milk.

After maturing the Halloumi/Hellim is packed airtight or in bulk containers with whey brine, fresh Halloumi/Hellim is kept at a temperature below 7°C, mature Halloumi/Hellim is kept in a cool place.

9.6 LABELLING OF PDO HALLOUMI/HELLİM

The packaging of the product shall be, at least, labelled with the following:

- Name of the product
- Identification mark (this will be possible once the milk processing establishments are approved and assigned the approval number)
- Origin of the product (name and address of manufacturer)
- Shelf life, date of minimum durability or use-by date
- Recommended storage conditions
- The net quantity of the food
- A nutrition declaration
- List of ingredients - the list of ingredients shall be headed or preceded by a suitable heading i.e. the word 'ingredients'. It shall include all the ingredients of the product, in descending order of weight, as recorded at the time of their use in the manufacture of the PDO Halloumi/Hellim.

Labelling, in wording or pictures, should not mislead consumers. It should not suggest, by means of appearance, description or pictorial representations false or inaccurate presence or percentage of a particular ingredient/type of milk (milk of different species). If PDO Halloumi/Hellim is produced with e.g. 60% of cows' milk and 40 % of sheep milk, cows' milk should be listed in the first place, before sheep milk.

9.7 OWN CONTROLS (LABORATORY TESTS)

The HACCP plan of the establishment shall include own controls related to the safety of the PDO Halloumi/Hellim. These controls must cover at least the following hazards:

Microbiological agents:

- *Escherichia coli*
- *Coagulase positive Staphylococci or their toxins*
- *Listeria monocytogenes*
- *Salmonella*

Chemical hazards:

- Regular check of each raw milk consignment with rapid test kit for presence of antibiotics
- Verification test for veterinary medicinal product residues with accredited method
- Pesticide residues
- Mycotoxins (Aflatoxin M1)

Verification of the effectiveness of pasteurization:

- Alkaline phosphatase test

The chemical control, as a part of FBO's sampling plan, should be carried out to ensure that the composition of the product is in accordance with the PDO Halloumi/Hellim specification and the labelling of the specific product.

The frequency of the tests shall be risk-based established except for the rapid test for detection of antibiotic residues in raw milk which has to be carried out for each incoming raw milk consignment.

ANNEXES

ANNEX 1:
GUIDELINES FOR TRACEABILITY DOCUMENTATION OF FEED PRODUCERS

TRACEABILITY PROCEDURE FOR FEED PRODUCERS

The feed business operator, even if it operates exclusively as a distributor without the feed ever being on its premises, shall keep records in a register containing relevant data for effective traceability, including information on purchase, manufacture, and sale, as well as receipt and delivery. The documents must generally be kept for 5 years from the date of manufacture or delivery.

The feed business operator, except for those who act only as a distributor without the feed ever being on its premises, shall document in a register:

DOCUMENTATION RELATING TO THE MANUFACTURING PROCESS AND CONTROLS

The establishment must have a documentation system that serves both to identify and master the critical points of the manufacturing process and to create and implement a quality control plan.

In order to be able to determine who was responsible in the event of complaints, the quality control plans, and the results stipulated therein must be kept by the feed business operator at least until the end of the best-before date of the feed, but in any case, for one year.

DOCUMENTATION REGARDING TO TRACEABILITY

- Name and address of the producers or suppliers of any raw material, additives, feed materials, or compound feed used in the production of feed, as well as the nature and quantity of a raw material, additives, premixtures feed materials, or compound feed used, where applicable the batch number and the date of delivery
- The nature and quantity of the feed (additives, premixtures, feed materials, compound feed) produced, the respective dates of manufacture and, where appropriate, the number of the batch or of the specific portion of production, in the case of continuous manufacture
- The type, quantity and composition of the produced feed, the date of manufacture and, where applicable, the batch number
- Names and addresses of the feed business supplied with the feed (e.g., farmers, other feed business), the type and quantity of the feed supplied and, if applicable, the batch number and delivery date

The documents are to be kept for 5 years from the date of production or delivery. In the case of microbiologically perishable feed, the retention period for the records can be reduced to 6 months from the date of manufacture or delivery.

REQUIREMENTS FOR COMPLAINTS AND PRODUCT RECALL

The feed business operator shall establish a system for registering and processing complaints concerning feed safety requirements.

The feed business operator shall set up a system for the rapid recall of produced feed.

The feed business operator must record the location of the recalled feed in writing. Recalled feed must be re-evaluated by quality control before it can be put back on the market.

ANNEX 2:
EXAMPLE OF FEED LABELLING

Labelling should provide the necessary information to purchasers to enable them to make the optimal choice for their needs, and it should be consistent, coherent, transparent and understandable. The mandatory information should combine general labelling requirements and specific requirements for feed materials or compound feed respectively, and additional requirements in the case of dietetic feed, contaminated material and pet food.

1. The name and address of feed business operator	
2. Approval number of feed business operator	
3. Country of origin	
4. Type of compound feed	
5. Nutritional purpose and mandatory nutritional constituents (incl. moisture and ash)	
6. General instruction for use	
7. Species and category of target animals (Restriction for certain species)	
8. Net quantity	
9. Date of minimum durability (best before date) and storage condition	
10. Batch number	
11. Declaration of feed materials in descending order of weight	
12. Percentage declaration of certain feed materials % of local feed materials % of imported feed materials	
13. Declaration of certain specific feed additives where their presence is defined (name, added amount)	

ANNEX 3:
VETERINARY RECORDS ON DISEASED ANIMALS

ANIMAL ID					
DATE					
TYPE OF INFECTION					
TREATMENT (IF APPLICABLE) SEE: MEDICINE RECORDS					
ANIMAL ISOLATED? YES-NO-DATE	YES				
	NO				
	DATE				
FOLLOW UP NOTES					

ANNEX 4:
FORM FOR VETERINARY TREATMENTS

Name of Veterinary Medicine					
First Date of use					
Identity of Animal/Group Treated					
Person Administering Medicine					
Date Treatment Finished					
Withdrawal Period End Date	Milk				
	Meat				
	Other				
Total Quantity Of Medicine Used					
Batch No.					
Source Of Medicine					

ANNEX 5:
FORM FOR RECORDING WITHDRAWN MILK

WITHDRAWAL PERIOD FOR MILK FROM MEDICINALY TREATED MILKING ANIMALS (TEMPORARY BAN ON DELIVERY AND USE OF MILK FOR HUMAN CONSUMPTION)

"The withdrawal period is defined as the interval between the last administration of a veterinary medicinal product to animals under normal conditions of use and the production of foodstuff from such animals to ensure that such foodstuffs do not contain residues in quantities in excess of the maximum residue limits laid down."

Milk withdrawal period of 12 hours means that all milking's within a 12-hour period from the last treatment must be discarded and only milk taken at or after 12 hours is considered safe.

TEMPORARY DISCHARGE OF MILK FOR HUMAN CONSUMPTION

NO.	ANIMAL ID	DATE FROM-TO	VETERINARY MEDICINAL DRUG APPLIED (VMPS)	SIGNATURE OF VETERINARIAN

Regulation (EU) 2019/6 - The Regulation is central to achieve the **Farm to Fork Strategy (https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en)** targeting to reduce overall EU sales of antimicrobials for farmed animals by 50%.

ANNEX 6:
SELF-ASSESSMENT PROCEDURE FOR FARMS
SELF-ASSESSMENT CHECK FOR HYGIENIC MILK PRODUCTION AND STORAGE OF MILK (AT LEAST ONCE PER MONTH)

CONSIDERATION	REQUIREMENTS	ASSESSMENT CRITERIA	REQUIREMENTS MET?	
			Y	N
PRE-MILKING STAGE OF PRODUCTION				
POTABLE WATER	Availability of adequate and clean potable water	Physical inspection of water sources		
		Laboratory testing of the water		
WASTE MANAGEMENT	Waste disposed in a manner to prevent contamination of milk	Physical inspection of milking areas		
	Adequate and appropriately located toilet facilities provided	Physical inspection of toilet facilities		
DUST MANAGEMENT	Milk production areas and surroundings free of dust	Physical inspection of milking areas		
ANIMAL HEALTH MANAGEMENT	Dairy animals free from zoonotic diseases	Physical inspection of animals		
		Sick animals are examined and treated by qualified veterinarian		
	Milk free from antibiotics and other veterinary drugs	Testing for antibiotics and veterinary drugs residues are conducted		
	Prevention and control of Mastitis	Effective strategies to control mastitis based on hygiene and including teat disinfection, antibiotic therapy, and culling of chronically infected cows		
		Separate the cows into two groups, of high and low cell counts		
		Cows with increased SCC dairy cows should be milked last		

CONSIDERATION	REQUIREMENTS	ASSESSMENT CRITERIA	REQUIREMENTS MET?	
			E	H
PRE-MILKING STAGE OF PRODUCTION				
FEED AND FEEDING	Forage, feed and fodder safe and free of pathogens, pesticide and toxin residues in excess of allowable limits	Test for pesticide residues and aflatoxins conducted		
	Feeds are stored under recommended conditions	Physical inspection of feed storage areas		
	Feed source from known supplier - treacebility on place	Records for the quality and quantity of the feed/test certificates		
PERSONNEL	Milking personnel are free of contagious or infectious diseases	Medical examination of milk handlers conducted		
	Milkers and milk handlers observe appropriate personal hygiene and conduct	Physical examination of milk handlers		
EQUIPMENT, CONTAINERS AND UTENSILS	Equipment, utensils and containers are clean and suitable for handling milk	Physical inspection of equipment, containers and utensils		
		Rinse and swab testing of equipment and utensils is conducted		
	Cleaning and sanitization conducted using appropriate agents	Physical inspection of cleaning and sanitization agents		
		Cleaning schedule in place and Implemented		
MILKING PARLOUR	Floor is impervious and self-draining	Physical inspection of milking parlour		
	Has adequate lighting and ventilation	Physical inspection of milking parlour		
	Surroundings are neat and clean and free of waste and effluent	Physical inspection of milking parlour		

CONSIDERATION	REQUIREMENTS	ASSESSMENT CRITERIA	REQUIREMENTS MET?	
			E	H
MILKING				
HYGIENIC MILKING	Animals showing clinical signs of diseases are segregated and milked separately	Physical inspection of milking process		
	Udder and teats are effectively cleaned and dried at the time of milking	Physical inspection of milking process		
	Teats free of visible defects including mastitis	Physical inspection of milking process		
		Testing for mastitis is conducted		
		Testing for somatic cell counts is conducted		
HANDLING AND STORAGE				
STORAGE CONTAINERS AND TANKS	Storage containers are clean and do not contaminate milk	Physical inspection of storage containers		
STORAGE TEMPERATURE AND TIME	Milk is cooled to four degrees centigrade within two hours	Temperature and time analysis of stored milk		
STORAGE ENVIRONMENT	Milk storage premises is suitably located and constructed to avoid risk of contaminating the milk	Physical inspection of milk storage premises		
WHOLESOMENESS OF THE MILK	Milk is wholesome and does not contain added water, preservatives, or other substances	Organoleptic test is conducted		
		Lactometer test is conducted		
SÜTEK FEEDBACK				
HANDLING OF SÜTEK FEEDBACK AND COMPLAINTS	There is a mechanism to receive and respond to customer complaints or feedback	Physical verification		
	There is a mechanism to receive SÜTEK feedback in case of non-compliance with lab test results (TPC; SCC; aflatoxin; antibiotics/ inhibitors)	On-line checking lab results		

Record observations in the self-assessment checklist and make any other relevant observations that may not be in the checklist.

Evaluate findings at the end of the self-assessment and address areas of non-compliances.

ANNEX 7:
FORM FOR RECORDING HEALTH CHECKS OF ANIMALS

FARM REGISTER NUMBER	
NAME AND SURNAME OF THE FARMER	
ID NUMBER	
ADDRESS	

Examination No.	Animal ID	Diagnostic and laboratory tests						
		Laboratory examination*			Mastitis**		Disease***	
		Date	Sample Type	Result	Udder Teats	Result	Sample Test	Result

* Sample type: Plate count-TPC; Somatic cell count-SCC; Antibiotics-Ant; Inhibitors-Inh; Contaminants-Cnt;

** Front left Front right, Rear left, Rear right Score results: **N**-Negative: No mastitis, **T**-Trace: Mastitis in one or more quarters, **1**-Weak Positive: Define mastitis - Check quarters, **2**-Distinct Positive: Serious Mastitis - Check quarters

*** B=Blood, M=Milk, O=Other

ANNEX 8:
PRODUCTION RECORD FOR FEED

YEAR:			MONTH:		
NO	FEED/ PRODUCT	MACHINE/ EQUIPMENT USED	MEASURE (PIECES /KG)	QUANTITY	DATE OF PRODUCTION/ COLLECTION
1.					
2.					
3.					
4.					
5.					
6.					

ANNEX 9:
FORM FOR FEED PURCHASE RECORDS

FEED PURCHASE RECORDS				
	DATE OF PURCHASE			
	DESCRIPTION/ PRODUCT NAME			
	FEED BATCH OR INVOICE (WHERE AVAILABLE)			
	QUANTITY PURCHASED			
	SUPPLIED BY/ PURCHASED FROM			
	RESIDUE ANALYSIS CERTIFICATE AVAILABLE / PRODUCT TESTED			
	COMMENT			

ANNEX 10:
FORM FOR FEEDING RECORDS

DATE	FEEDSTUFF DESCRIPTION/QUANTITY				STORAGE LOCATION	PERSON RESPONSIBLE FOR FEEDING
	FODDER CROPS		CONCENTRATE FEED			
	Own production (green grass, hay, silage, straw, wild vegetation)	Purchased production (green grass, hay, silage, straw, wild vegetation)	Own produced concentrate	Purchased concentrate		

ANNEX 11:
FORM FOR FEED SUPPLIER LIST

NO.	SUPPLIER	FEED/ SUPPLEMENTS	CONTACT PERSON	MOBILE PHONE	ADDRESS

ANNEX 12:
FORM FOR RECORDING GRAZING

FARM GRAZING RECORD

(Farm level records for grazing land must include: the parcel number(s) so that the data is linked to the relevant parcel, the option code that applies to the parcel(s) so that the data is compared with the parcel, consider the age of the farm animals)

LAND PARCEL MANAGED BY THE FARM:

YEAR:

No.	Parcel no.	Parcel Description	Area (Ha)
1			
2			
...			
Total area (Ha)			

DESCRIPTION:
Pasture species and varieties (please underline the relevant)

- *native grass*
- *pasture herb*
- *forage plant*

MONTH	SHEEP/ GOAT OVER 1 YEARS OLD	SHEEP/GOAT OVER 4 MONTHS TO 1 YEARS	OTHER	FORM COMPLETED BY	FORM COMPLETED DATE
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

ANNEX 13:
FORM FOR LIST OF CONTACTS

CONTACT LIST WITH CORRECT DETAILS OF DIFFERENT SERVICES OR PEOPLE TO CONTACT IN AN EMERGENCY/ DAY-TO-DAY

MILKING MACHINE MAINTENANCE	SERVICE/CONSULTATION
Contact name:	
Mobile phone:	
Email:	
Address:	
COOLING TANKS MAINTENANCE	**SERVICE/CONSULTATION**
Contact name:	
Mobile phone:	
Email:	
Address:	
PEST CONTROL PROVIDER	**SERVICE/CONSULTATION**
Contact name:	
Mobile phone:	
Email:	
Address:	

ANNEX 14:
FORM FOR MILK PRODUCTION RECORDS
INDIVIDUAL MILK PRODUCTION RECORDS

Animal ID				Milking cycle number-lactation		
Year				Month		
Date	Quantity of milk (l)					Remarks
	Morning	Afternoon	Colostrum milk/other purposes	Total		
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
...						
29.						
30.						
31						
Total:						

Recorded by: _____

ANNEX 15:
DAILY FARM LEVEL MILK PRODUCTION RECORD

Year

Month

Date	Time first milking second milking	Total number of cows on the farm	Number of cows milked	Number of cows which milk is collected in Tank 1	Quantity of milk collected in Tank 1	Number of cows which milk is collected in Tank 2	Quantity of milk collected in Tank 2	Other milk for calves or another purpose	Remarks
1									
2									
3									
4									
5									
6									
7									
TOTAL									

Recorded By:

Remarks: The daily milk production record for the milk yield performance of the cows which are eligible for the production of PDO eligible milk for each milking is maintained separately from the one for milking of the PDO non-eligible animals (if there are any).

ANNEX 16:
FORM FOR RECORDING CHEMICALS USED
LIST OF CHEMICALS (DISINFECTANTS, SANITIZERS/CLEANING PRODUCTS)

NO.			
PRODUCT/CHEMICAL NAME			
SUPPLIER-MANUFACTURER			
PURPOSE			
METHOD OF USE			

ANNEX 17:
FORM FOR RECORDING MILK TEMPERATURE DURING STORAGE
MILK TEMPERATURE RECORDS

Verification of the temperature of milk during storage (T°C)						Remarks: the temperature shall be recorded every third day, if there are no deviations with the recorded temperature during the first month after one month once a week			
DATE	TIME	T°C	SIGN.	COMMENTS	DATE	TIME	T°C	SIGN.	COMMENTS
01					01				
02					02				
03					03				
04					04				
...					...				
29					29				
30					30				
31					31				

ANNEX 18:
FORM FOR WATER MONITORING
FARM WATER MONITORING RESULTS

NO.			
MONTH			
NUMBER OF SAMPLES			
TYPE OF ANALYSIS (MB/CH)			
PARAMETER CHECKED			
RESULTS			
SIGNATURE			
COMMENTS			

ANNEX 19:
FORM FOR VISITORS' LOGBOOK

Visit no.				
Name of person (Visitor name)				
Visitor from (Name of the company/Firm name)				
Meeting with (Staff / manager name)				
Reason for visit (Short description for purpose of the meeting)				
Last time visited on date				
Time	In			
	Out			
Time spent	Hour			
	Minute			
Activity done during stay				

ANNEX 20:
GUIDELINES ON TRACEABILITY FOR MILK TRANSPORTERS
GUIDELINES FOR DAIRY TRANSPORT TRACEABILITY

The dairy transport businesses must include a traceability system as part of their food safety program for the milk collected and transported. The intent is to trace the movement one step backwards (immediate supplier) and one step forward (immediate recipient).

Traceability allows the monitoring of milk transportation processes and the tracking of the milk through these processes. This facilitates food safety issues to be tracked back to their cause, which allows corrective actions to be undertaken.

The 'immediate supplier' is the dairy primary production business from which the milk was collected. The 'immediate recipient' is the business that receives the milk from the dairy transport business.

The dairy transport business should enable tracing of milk and for that purpose needs to maintain records that identify:

- the vehicle number used
- where the milk was collected from, including date and time of collection from farm
- description and quantity of the milk
- milk delivery destination, including date and time of delivery

Milk collector/transporter should ;

- Have access to the updated registry of registered/approved PDO holdings and their contacts (names of responsible persons, email addresses and phone numbers).
- Have access to the updated list of PDO Halloumi/Hellim eligible producers and their contacts (names of responsible persons, email addresses and phone numbers).
- Keep records of the information concerning issues having an impact on the PDO status of the holding and/or PDO Halloumi/Hellim producers and enter this information in the database in the given time.
- Inform timely the local body responsible for PDO holdings and the local body responsible for PDO Halloumi/Hellim producers about issues having an impact on the PDO status of the holding and/or PDO Halloumi/Hellim producers.
- Keep records/archive of the milk collection documents (of the milk collected at the PDO holding and the milk delivered to PDO Halloumi/Hellim establishment).
- Keep records on the routing and on transport vehicles used for transport of PDO milk.
- Keep and share any other information relevant to any stage of PDO production and PDO milk channeling.
- Cooperate with local bodies.

ANNEX 21:
BASELINE INSTRUCTIONS FOR TRACEABILITY

GENERAL INSTRUCTIONS ON OPERATION OF THE TRACEABILITY SYSTEM

Traceability system operates through manual recording (paperwork) forms from the supplier on until the process of packaging and dispatching following the traceability procedure.

For the traceability purposes coding of the final product is by date of production.

Incoming goods receiving is recorded on the incoming goods receiving record on which following data are recorded:

- the supplier
- date of receiving
- the total amount of received product
- traceability code
- transportation vehicle
- plate number
- hygienic condition and
- document checks

During processing, data for mixture preparation ingredients, packaging materials used, cleaning, start and end production time, blade checks, hygiene, pH, total production quantity are recorded in the **production control record**.

Also performed production checks for sealing, product opening, labelling, product weight, number of pieces are recorded in the **production checks record**.

For product dispatch evidence the type of the product, product quantity, traceability code number, client, date of dispatch, truck plate number and transportation vehicle conditions are recorded on the **product dispatch record**.

ANNEX 22:
DETAILED DESCRIPTION OF TRACEABILITY SYSTEM
TRACEABILITY PROCEDURE

PURPOSE:
The purpose of the traceability procedure is to trace and follow products, raw materials incorporated into a product through all stages from receiving the raw milk, storage of the milk, processing and distribution.

The established traceability system should be able to determine the origin and location of the raw material, the intermediate product, as well as the final product, on each step of the process.

The system should be able to demonstrate not only the origin of the eligible milk, but also its use in line with the specifications and the separation between the production of PDO Halloumi/Hellim and other products. The traceability system needs to be qualitative and quantitative.

Implementation of traceability procedure must take into consideration:

- the raw material quality
- the organization
- the production area
- the quality control/quality assurance
- the finished product

The successful implementation of the traceability system requires close co-operation between departments.

With this traceability system in the event of a product incident and product withdrawal/recall traceability records will be provided within a short time period for routine examination or investigation purposes at the demand of the local control bodies.

SCOPE:
From: Input of raw material
To: Product on the market

RESPONSIBLE PERSON:
The Food Quality and Safety Manager is responsible for the successful implementation and functioning of the traceability system.

PROCEDURE:
The traceability documentation needs to cover the following sections:

- receiving and storaging of raw milk,
- pre-process treatment,
- product processing,
- product packaging and labelling,
- Internal transport and storage.

Each of these sections may be headed by a manager or supervisor, depending on the size of the operation.

Elements of the traceability system at dairy plants:

- Supplier traceability: traceability of the suppliers of food and packaging to the food business operator.
- Process Internal traceability
- Customer traceability: tracking the food leaving the food business operator's establishment to the immediate customers receiving it.

Records of deliveries of products and packaging with all information necessary to maintain traceability of raw materials from the supplier:

Raw Material Quality - Raw material are all the ingredients required to make the product, as well as any other materials needed in the manufacturing process. Raw material quality control, as well as their correct handling, are the responsibility of the quality control department. Packaging materials should be stored and handled in accordance with the recommendations of the supplier. Appropriate testing procedures should be established, formulated and implemented for each new assignment. Chemicals should be purchased according to clear quality specifications and handled and stored in accordance with the manufacturer's recommendations.

Company process traceability information in order to be able to ensure that the ingredients and primary packaging used in foods produced on the premises are traceable back to their suppliers.

Customer traceability information to be able to ensure that food leaving the control of the business is traceable to the immediate customer. Product placed on the market must be labelled to facilitate its traceability through documentation or other information. As a minimum, the following information concerning consignments of food shall be kept:

- an accurate description of the product
- the volume or quantity of the product
- the name and address of the food business operator to whom the product was dispatched
- the name and address of the consignee (owner), if different from the food business operator to which the product is dispatched
- a reference identifying the lot, batch or consignment, as appropriate, and
- the date of dispatch

The information that should be recorded at the milk reception is:

- Batch No
- Date and time of reception of the milk
- Temperature of the milk
- Quantity of milk received for each individual farm and type of milk (farm of origin of the milk – name and/or registration number)
- Organoleptic test
- Alcohol stability
- Clot on boiling test for milk
- Cryoscopy

- Density
- SNF (Solid Not Fat)
- Total solids
- Acidity
- pH
- Result of test on antibiotic residues
- Other chemicals
- Batch approval and ACC

Supplier - Identification of the transporter: this should be the licence plate of the vehicle (including trailer) specially dedicated for the collection of PDO milk.

Confirmation that transport took place in dedicated vehicles: In order to have a more robust system, in the absence of better developed 'official' controls, it is recommended that dedicated vehicles are used to collect only PDO eligible milk.

Reference to the transport document

Confirmation that the farm of origin and the milk collected are approved for the production **of PDO Halloumi/Hellim**. It is recommended to include in the transport document a statement that the milk collected is in accordance with the specifications as laid down in the PDO requirements regarding species, breed, feeding, etc.

Species of the animals from which the milk is collected. Milk of cows should not be mixed prior to reception in the establishment.

All tanks where the received milk is stored in the establishment after negative test for the presence of antibiotics and acceptance should be identified (e.g.number). Specific tanks should be dedicated for the storage of PDO eligible milk. If milk is transferred from one tank to another, this should also be recorded in a transparent way. Tanks for the storage of unpasteurised milk should not be used for the storage of pasteurised milk.

Reference number of the production sheet: When milk is used for further production, the reference number of the relevant production sheet should be mentioned to allow traceability.

Quantity of milk taken from the tank and remaining stock: It is important to indicate the quantity taken from the tank for further processing steps (e.g. pasteurisation or heating). If the whole amount of received milk (stock) is not used the same day, the register should keep track of this situation and provide the information to ensure the traceability.

It might be considered to allow the mixing of milk of different species in the establishment before or after pasteurisation. However, in order to obtain the correct minimum percentages of sheep and/or goat milk, the procedures and reception and production sheets need to be drafted accordingly.

MILK RECEPTION				
	DATE AND TIME OF RECEPTION	14/02/2023 07:00	14/02/2023 07:30	14/02/2023 08:00
	LICENCE PLATE			
	FARM OF ORIGIN	XXXX	YYYY	ZZZZ
	FARM AND MILK ARE PDO APPROVED	ON LIST	ON LIST	NOT ON LIST
	QUANTITY (L)	1500 LITER	5000 LITER	20.000 LITER
	SPECIES Cow, Sheep, Goat, Sheep and Goat mixed	SHEEP & GOAT	COW	COW
	TRANSPORT IN SEPARATE TRANSPORT VEHICLES Yes/No	YES	YES	YES
	STORAGE TANK No.	A1	B2	B1
	REFERENCE No. OF PRODUCTION SHEET(S)	P/OOO1	P/OOO1	P/OOO2
	QUANTITY USED (L)	1000	1000	20.000
	STOCK (L)	500	4000	0

RECORDS ON PROCESS INFORMATION IN PRODUCTION SHEETS

The minimum information should be:

- **Reference number of this production sheet:** This is advisable for further reference in other production steps.
- **Date of treatment**
- **Indication if the milk is PDO eligible:** It is essential to know which part of the production can be used for the production of PDO eligible product. Mixing PDO eligible and non-eligible milk together has as a consequence that the whole batch becomes ineligible, regardless of the percentages used.
- **The number of the storage tank.**
- **The quantity** of the milk used.
- **Number of the pasteurisator used** in case that more than one is in function.
- **Start and end time** of the pasteurisation/heating process.
- **The temperature** that should be reached and the measured temperature at the end of the process.
- **Concentration:** Milk to be used for PDO production should not be exposed to concentration.
- **The further use:** It is important to know if the rest of the process will lead to an PDO eligible product. e.g. PDO Halloumi/Hellim, Non-PDO products, yogurt, ...

- **Identification of the storage vat:** In the case that intermediate storage takes place, the identification of that vat has to be recorded. It is essential to know which part of the production can be used for the production of PDO eligible product. Mixing PDO eligible and non-eligible milk together has as a consequence that the whole batch becomes ineligible, regardless of the percentages used.
- **Batch number:** Products (also intermediate products) produced under the same conditions and on the same day should have an individual batch number. It might be advisable to indicate in the batch number a code referring to the PDO status.
- **Next production sheet number:** In the case that additional processing takes place, it is recommendable to indicate the reference number of the following production.

DATE: 14/02/2022	PDO ELIGIBLE (Yes/No)	YES	YES	NO
	TANK No. of MILK USED	A1	B2	B1
	QUANTITY	1000	1000	20.000
PASTEURISATION/ HEATING	No. PASTEUR	P1	P1	P2
	START TIME	09:00	09:30	10:00
	END TIME	09:10	10:01	10:10
	TEMP	75°C	65°C	75°C
	CONCENTRATED (No/Yes)	NO	NO	YES
	STORED (No/Yes)			
	FURTHER USE e.g. PDO HELLİM, Non-PDO product yogurt	e.g. PDO HALLOUMI/ HELLIM	e.g. PDO HALLOUMI/ HELLIM	KAŞAR
PRODUCTION SHEET NUMBER P0001	BATCH NUMBER			
	NEXT PRODUCTION SHEET No.	PDO/001	PDO/001	NON/001[2]

The production method, as determined in the product specification, should be clearly described in the processing methodology as part of the HACCP documentation. There is no need to record all these specifications in production sheets and record all of them for each batch, with the exception of some temperature requirements and essential data to guarantee the traceability.

- The raw milk is pasteurized (optional step)
- After pasteurization the milk is cooled, and rennet is added
- Processing of curd:
  - Cutting the curd
  - Reheat with stirring up to 40°C
  - Placing in baskets, cheesecloth or suitable molds
  - Pressure application to remove whey
  - Extraction of anari (nor) from whey (with heating at 80°C)
  - Cooking the curd at a temperature above 90°C for at least 30 minutes
  - Extraction from whey and surface salting (optional step)

[2] It would be advisable and less complicated to have a different system for production sheets and numbers when production for PDO is made.

- Adding a mixture of fresh mint or dried mint and salt (optional step)
- Folding Halloumi/Hellim (optional step)
- Cooling of Halloumi/Hellim
- Wrapping and storing (fresh Halloumi/Hellim) in containers for 1-3 days with brine
- Placing and packaging with brine at 15-20°C for at least 40 days (matured Halloumi/Hellim)
- Storage at 7°C (fresh Halloumi/Hellim)
- Store in brine

For the production of Halloumi/Hellim the following minimum data should be recorded:

- **Date of production**
- **Identification of the vat** in which coagulation takes place. This is particularly required when the FBO is producing PDO and non-PDO products.
- **Internal Batch number** or reference of the heated or pasteurised milk used to produce the Halloumi/Hellim
- **Batch number** given to the production of Halloumi/Hellim
- **Temperature requirements:** The PDO product specifications specify several temperature requirements. The control of these requirements should be done based on the data recorded. It is not determined if this is needed on a systematic basis for each batch or if it could be organised as a monitoring of the process specification.
- **Weight of curd:** in order to be able to evaluate the yield and the plausibility that the amount of final product has been produced with PDO eligible milk, the weight of the curd must be recorded.
  - after pressing: the curd is removed from the whey and pressed to remove the excessive amount of whey.
  - after cooking: the cooking process has an impact of the actual weight of the final product
- **Eligibility for PDO of the batch:** Including if a batch is eligible for PDO production will enhance the transparency and make the system more auditable and robust.

To facilitate and enhance the understanding of the expected traceability, some examples of registering of the minimum data are given at the table on page 54. These examples have to be seen as a source of inspiration to develop a new traceability system or to amend the existing ones, and not necessary to be used as such.

DATE: 14/02/2022	START TIME					
	No. OF VAT					
	No. BATCHES USED					
	QUANTITY					
PRODUCTION PDO HALLOUMI/HELLIM	% SHEEP & GOATS MILK					
	RENNET ADDED (time)					
	Temperature requirements	Curd at stirring	Temp			
		Whey at start cooking	Time			
			Temp			
		Core temp curd 90°C	Time			
			Temp			
		End cooking curd	Time			
			Temp			
PRODUCTION SHEET NO PDO/001	Weight curd	After pressing				
		After cooking				
	Batch no.					
	ELIGIBLE FOR PDO Yes/No					

Recording of additional data is recommendable to be decided by the FBO to manage their specific procedures, such as end times of different operations, weight of the recuperated whey, responsible person, etc.

For the additional steps in the production of Halloumi/Hellim, the following minimum data should be recorded concerning the salting, adding a mixture of fresh mint or dried mint and salt, folding Halloumi/Hellim, cooling of Halloumi/Hellim, wrapping and storing (in the case of the production of fresh Halloumi/Hellim) in containers for 1-3 days with brine at 7°C, wrapping and storing with brine at 15-20°C for at least 40 days (in the case of the production of matured Halloumi/Hellim).

For each batch of final product, data concerning the ingredients used should be recorded. These records should contain the internal batch codes of the ingredients used (curd, salt, mint) and the quantities for the dates of the different activities.

To facilitate and enhance the understanding of the expected traceability, some examples of registering of the minimum data are given. These examples have to be seen as a source of inspiration to develop a new traceability system or to amend the existing ones, and not necessary to be used as such.

Additional production sheets can be created when different activities take place on different days or are spread over different days. The link between the different phases of production carried out on different days should be ensured.

PRODUCTION SHEET FOR INGREDIENTS AND PACKING MATERIAL USED										
DATE	MILK		MINT		SALT		RENNET		PACKING MATERIAL	FINAL PRODUCT
Date	Batch No.	Quantity	Batch No.	Quant.	Batch No.	Quant.	Batch No.	Quant.	Batch No.	Batch No.

- **Batch number of final product:** For each batch of final product, data concerning the ingredients used should be recorded.

These data could be integrated or copied in other production sheets if more convenient. In any case, whenever different sheets/records are used, there must be a clear link between them.

The minimum information that should be recorded to ensure traceability of ingredients:

The FBO should be able to provide documentation for each ingredient used concerning the supplier, the quantity and origin of all batches of raw material and/or products received. It is recommended to keep all invoices and a register of all incoming goods containing the following minimum data:

- **Reference number of invoice:** the FBO should develop a system allowing to make the link between the invoices of the purchased ingredients and the batches of product (PDO Halloumi/Hellim) in which these ingredients are used. It might be necessary to specify the batch number of the supplier if more than one batch of a similar ingredient is covered by the same invoice.
- **Batch number of supplier** if available and if necessary
- **Internal batch number of the ingredients:** The FBO can decide to develop an internal batch number for the ingredients used.

The below examples have to be seen as a source of inspiration to develop a new traceability system or to amend the existing ones, and not necessary to be used as such.

REGISTER FOR INGREDIENTS AND WRAPPING/PACKAGING MATERIAL							
Date	Ingredients	Supplier	Reference Invoice	Quantity	Batch Number Supplier	Internal Batch Number	Best Before Date
	Raw Cow Milk						
	Raw Sheep Milk						
	Raw Goat Milk						
	Salt						
	Mint Leaves						
	Rennet						
	Wrapping Plastic Foil						
	Carton Boxes						
	E.g						

All documents (transport documents, invoices, etc) related to the incoming material (milk, salt, mint leaves, etc.) should be kept. These documents should be kept sufficiently long to allow the auditing body to verify the traceability system in at least two consecutive audits, unless it is differently specified in the legal texts.

A separate document for traceability and management of wrapping and packaging material is available.

The minimum information that should be recorded to ensure traceability of despatch of final products.

The FBO should be able to provide documentation for each despatch of final product at the time of despatch. It should allow to trace back from the destination (consignee) back to the origin of the milk received and vice-versa, based on the whole traceability system in place. It is required to keep all invoices and a register of all out-going products containing minimum the following data:

- **Date of dispatch:** The date of dispatch has to be recorded and not the date of the invoice which might be different. The reference number of the invoice and of the transport document will ensure the link to the further information.
- **Consignee:** Name or reference to the consignee, allowing to identify the name, address and contacts.
- The description of each dispatched product, its **batch number** and **quantity** should be recorded.
- **Eligibility for PDO of the batch:** Including the information if a batch is eligible for PDO production will enhance the transparency and make the system more auditable and robust.

The below examples have to be seen as a source of inspiration to develop a new traceability system or to amend the existing ones, and not necessary to be used as such.

REGISTER FOR OUTGOING FINISHED PRODUCT								
DATE	CONSIGNEE	REFERENCE No. INVOICE	REFERENCE TRANSPORT DOCUMENT	PRODUCTS	QUANTITY	BATCH No. PRODUCT	PDO ELIGIBLE Yes/No	REMARKS

GENERAL COMMENT:
Registration can be done in electronic format under the condition that the recorded information cannot be modified/altered without leaving a trace of the original information and a justification and authorisation by the system administrator.

ANNEX 23:
SIMULATION EXERCISE FOR INTERNAL TRACEABILITY CHECK
TRACEABILITY CHECK (SIMULATION)

Traceability system operates through manual recording (paper work) forms on suppliers, production through processing to packaging and dispatching following the traceability procedure.

Name of the final product	Lot (Batch/Serial) number of the final product	Total quantity (pieces/kg) of the produced product	Date of production

Fill the table with data for materials used.

Material	Lot number	Added amount	Date of receiving	Name of supplier

Dispatched on date	Quantity/pieces of final product dispatched	Quantity (pieces/kg) in laboratory if difference between produced and dispatched number of pieces	Customer

ANNEX 24:
PROCEDURE FOR RECEIVING INCOMING GOODS

PURPOSE:
To establish a procedure ensuring purchased products or services meet specified requirements.

SCOPE:
From: need of supply of products and services
To: receiving goods in the warehouse/realization of the service

RESPONSIBLE PERSON:
Warehouse manager
Quality manager

PROCEDURE:
Receiving of the incoming goods is done at the receiving dock.

Receiving inspection is performed on all incoming shipments, consisting of a visual inspection checking the following:

- Verify product numbers, description and quantities match purchase order
- Verify vendor paperwork accurately matches shipment
- Check the vehicle interior is in a good hygienic condition with no sign of off taint or odour
- All pallets should be intact i.e. no splinters or nails protruding
- All bags, boxes, drums, cans etc. must be sealed and have no obvious damage
- No debris such as glass or dirt should be on the product packaging
- Check all pallets and ingredients for signs of infestation or evidence of pests
- The packaging should have no off odour
- All products must be within shelf life
- Check the product conformity against specification

If the delivery does not satisfy the above criteria the delivery is not received, and quality manager shall be informed immediately.

If the product shelf life is expired, then the responsible person rejects the product, and the product is not received. If the product is from import the product should be received and the responsible person should write a report and store the product in a specially designated place for non-conformity products and keep it on hold (quarantine). The supplier should be informed and the product should be safely destroyed. Where product shelf life is insufficiently long, the product is received, labelled and stored in a special place, and additionally will be decided for further action.

If the product is out of specifications, packages are obvious damaged, have signs of physical debris, or signs of pests, the quality manager shall be informed.

If the product receiving is approved, the products are stored in a warehouse. Receiving personnel enter the received shipment information into the Receiving Incoming goods record.

All documents for product receiving should be kept on file.

ANNEX 25:
FORM FOR EXTERNAL SUPPLIERS' APPROVAL
RECORD FOR EXTERNAL SERVICE SUPPLIERS' EVALUATION

	Supplier/service		
CRITERIA	Quality of service delivery		
	On time service delivery		
	Service cost		
	Efficiency in complaints resolving		
	License/ Accreditation/ Certificates		
	Score		
	Comment		
Approved	YES		
	NO		
	Data		

TOTAL SCORING

A. Very satisfactory	45-50 points
B. Satisfactory	35-45 points
C. Not Satisfactory	<35 points

Conducted by: _____

Date: _____

Approved by: _____

ANNEX 26:
FORM FOR EXTERNAL SERVICE SUPPLIER LIST
APPROVED EXTERNAL SERVICE SUPPLIERS LIST

Approved external service suppliers list for_____

Supplier of external service	Address	Contact person	Tel No.	Service	License / Accreditation / Certificates

ANNEX 27:
FORM FOR DOCUMENTATION OF STORAGE OF GOODS

STORAGE RECORDS	
Date:	Production date:
Volume:	Product:
Internal match. no:	Storeman:

Time	Pallet No.	Time	Pallet No.	Time	Pallet No.	Time	Pallet No.

Notes:

Storeman:	Controlled by:

ANNEX 28:
PROCEDURE FOR RECORDING PROCESS DEVIATIONS

PROCEDURE FOR PROCESS DEVIATION RECORD

Special attention must be paid to any deviation from the intended process, particularly if such a deviation occurs at (critical) control points. Special records should be prepared if that happens, and methods and procedures should be clearly laid down of how to proceed in such situations. Process deviation records should contain:

- date (day, month, year)
- time (hour, minute)
- duration of the deviation
- kind of deviation
- steps and measures taken to rectify the situation
- all other relevant information

The safe production of shelf-stable, in-flow sterilized and aseptically packaged low- and high-acid food products depends on the proper applications of a scheduled, controlled process, the parameters of which have to be determined by the equipment supplier(s) and/or by a process authority. Any deviation from such a scheduled, controlled process has to be recorded in a special process deviation record. Suitable record sheets for process deviations should be prepared and properly signed.

The part of the production affected by the deviation should be quarantined, or reworked.

If held in quarantine, further actions should be based on adequate testing. Procedures for such testing should be written in advance and preferably discussed with a process authority (or with the supplier of the equipment). Test results obtained as well as actions taken should be included in the process deviation record.

Specific persons should be nominated to be responsible for the proper handling of such deviations. Deviation records should be signed by the machine operator, the factory manager (supervisor), and the person responsible for any decisions taken.

ANNEX 29:
MAIN INSTRUCTIONS ON RECALL PROCEDURE

RECALL (EMERGENCY) PROGRAM

Each commercial processor producing short-life of long-life (i.e. shelf-stable) products should have an emergency (recall) program. Unfortunately, the possibility of real hazard due to spoilage or even worse - a public health risk, cannot, and should not, be totally excluded. Suitable preparations should be made to deal with such a situation and recall procedures need to be developed.

A person responsible, with duly appointed deputies, should be nominated to initiate and coordinate all emergency (recall) activities. This person should also function as the point of contact with the health bodies or any other legal body that might be involved in such situations.

A person should be nominated and made responsible for all contacts with the public media. It should be made very clear to every employee that this person is the only one authorized to answer questions and to make statements. Firm back up by top management is needed. It should be possible to contact this person(s) within a maximum of 24 hours throughout the year. On weekends, holidays, etc. forwarding addresses must be left with the company and all changes must be registered immediately.

The layout of manufacturing and distributing records, as well as the marking of outer wrapping and of each individual packaging should be such as to facilitate effective recall is necessary.

Written recall procedures should be prepared in advance. It should be possible to put such a program into effect at a (very) short notice and at any time within or outside working hours.

The recall procedures should be shown to be practicable and should be reviewed regularly.

It is the responsibility of top management that proper recall (emergency) procedures are established and, if necessary, effectively executed.

ANNEX 30:
PROCEDURE FOR INTERNAL AND EXTERNAL COMMUNICATION

PURPOSE:
The purpose of this procedure is to define the ways of communication among the company employees, achieving communication between different functions and levels within the company as well as communication between company representatives and external subject.

SCOPE:
From: Existing information
To: Shared information.

RESPONSIBLE PERSON:
Managing Director
Quality Assurance Manager

PROCEDURE:

External Comunication
To provide relevant information related to the company's product quality and safety the management team of the company, establish and maintain effective communication with:

- Suppliers
- Customers
- Local bodies and
- Other entities that affect or may affect the efficiency of the quality management system

External communication conducted by the company management provides sufficient data and information to all company users.

The information collected through external communication are used as input data for quality management system updating as well as system reviewing and evaluation by the management.

Internal Communication

In the implementation of business processes necessary for the production safety of products, an obligation of the company staff is to establish the necessary communication, wherein information flow is always a two-way, depending on practical needs. New information concerning the rules and principles of safe production needs to be implemented.

The established system of communication is used to transmit information that is important to the products and services in terms of their use. Internal communication system is established and maintained in an effective way through the following techniques and procedures:

- Orally through internal meetings;
- Messages on bulletin boards;
- Internal e-mail correspondences;
- Trainings related to maintenance and improvement of management system as well as product safety awareness rising of the employees;
- Transmitting information by phone;
- Team meeting and meetings minutes;
- Corrective action record.

The procurement process at the company is performed by the commercial department in close collaboration with Business Development Director and Quality Assurance Manager. The responsible persons identify the purchasing need and prepare a purchasing request.

A special attention is given to providing information to the quality management team that is relevant to all aspects of their working activities, such as information concerning:

- Changes of the existing products or introducing new products
- New equipment purchases
- Changes in the facility infrastructure
- Changes of the operating personnel qualification level or change in the management hierarchy
- Changes in local legal rules
- Changes in cleaning and sanitation procedures Changes in packaging storage and distribution systems
- Information related to risks and control measures
- Customer requirements related to products
- Specific customer requirements
- Complaints indicating safety hazards associated with the product
- Other conditions that have an impact on product safety
- Relevant enquiries from external interested parties
- All other relevant information related to company's products and services

All employees are authorized and encouraged to react on communicated information based on their own personal opinion and to give their own opinion related to the information or the problem arisen by the given information. Proposals shall be submitted in writing form by completing all authorized records that are part of the quality management system.

All proposals are collected by the Quality Manager and reviewed together with the process responsible persons, performing their evaluation and the relevant ones are proposed to the General Manager for adoption.

ANNEX 31:
FORM FOR TRAINING RECORDS
TRAINING RECORDS

Name and surname		Date:	Trainer:
Position/Work performed on farm			
Topic:			
Topic:			
Topic:			
Topic:			
Topic:			
Topic:			
Additional training required	1. 2. 3.		
Previous trainings:			

CONTACT

+90 542 862 3000

tccfoodsafety

tccfoodsafetyproject.eu

foodsafetyprojectTCc@gmail.com

Tabak Derviş Street,
No: 3, Nicosia Cyprus

This publication was funded by the European Union. Its contents are the sole responsibility of the NSF Euro Consultants Consortium and do not necessarily reflect the views of the European Union.

EU FOOD SAFETY
AB GIDA GÜVENLİĞİ