

TAINTS IN MILK - NOTES FOR GUIDANCE

REGULATIONS (EC) NOS. 852/2004 AND 853/2004 (AS AMENDED)

The Northern Ireland dairy industry has a well-proven record of quality milk production, which is widely recognised by consumers. It is in the interests of producers to protect this image by producing safe, high quality milk to ensure consumers and traders can continue to have confidence in Northern Ireland dairy products.

The Food Hygiene Regulations (Northern Ireland) 2006 and EC Regulations No. 852/2004 on the Hygiene of Foodstuffs and No. 853/2004, laying down specific hygiene rules for Food of Animal Origin, provide the legislative basis for the safe production of milk which is free from contamination .

Legislation states that milk must come from animals to which no unauthorised substances have been administered.

Premises where milk is produced, stored, handled or cooled must be located and constructed to limit the risk of contamination.

How does milk become tainted on the farm?

Contamination of milk by taints arise from three main sources:-

1. Chemical Taints

- Chemicals are used widely on farms for a variety of purposes. Medicines, drenches, pour-ons, foot dips, disinfectants, sheep dips, fly sprays, pesticides and herbicides are some of the commonly used chemicals.
- These should be used according to the manufacturer's instructions and only for their intended purpose. They should be stored safely and securely and only accessed by a competent operator.
- Phenols and Cresols

Beware of any farm chemicals containing phenols or cresols – they must be stored well away from the vicinity of the dairy. These substances can usually be identified by their pungent smell or because they turn white when added to water e.g. Jeyes Fluid, Creosote, Battles Black, tar or bitumen.

Phenols do not have to be mixed with milk to cause taint. They can be absorbed from the air by any exposed milk surface. Keep the bulk tank lid closed at all times. Keep the dairy doors closed.

Check with your vet that preparations used directly on cows' teats and udders do not contain phenolic compounds.

Use of Chlorine based detergents and sterilisers is discouraged by milk processors to prevent Chlorophenol taints arising in milk and milk products. This occurs when hypochlorite comes into contact with phenols or cresols.

Chlorophenols give rise to a burning sensation in the throat similar to TCP. However they are difficult to detect without tasting the milk as refrigeration suppresses the taint and so may not be noticed on the farm.

Do not use footbaths containing phenols or cresols as there is risk of splashing onto cows' teats and udders. Do not use these chemicals to disinfect cubicles, loose boxes or calving pens.

- **Pesticides**

Highly toxic chemicals such as pesticides should be stored safely and securely in a bunded, locked store well away from the vicinity of the dairy. Do not fill sprayers or mix spray in or near the dairy.

It is now a legal requirement for operators to complete training in safe handling and use of pesticides.

- Check the list of active ingredients on container labels. Do not use out-of-date chemicals or those with no label.

2. Bacterial Taints

- Bacterial taints arise when milk contains high numbers of bacteria due to poor hygienic production methods or faulty cooling equipment. The most common bacterial taints are 'sour', 'malty', 'barn' or 'rancid' taints.

Hygienic Milk Production

- Ensure cows are lying in clean, dry bedding with no accumulations of dung. This helps prevent dirty udders/teats at milking time. Practice a hygienic milking routine with stripping, pre-dipping and wiping with individual wipes before cluster attachment.
- Ensure the milking operator wears clean protective clothing/gloves and no smoking is allowed in the tank room (dairy) or milking area/parlour.

Correct Cleaning-in-Place (CIP)

- Thorough cleaning of milking equipment must be achieved to prevent high bacterial counts and off flavours in milk.
- Follow the recommended cleaning instructions for your milking equipment. Wash down the outsides of the clusters and tubes before attachment to the wash jettors.
- Ensure the correct concentration of a suitable dairy detergent is used, at the recommended circulation time/temperature.

- Rinse out the milking plant well after circulation cleaning and drain thoroughly. This ensures equipment is left clean for the next milking and bacterial growth within the liners and pipework is minimal. Refer to DAERA AfIB guidance notes on Cleaning Systems for Milking Plants.

Bulk Tank Cleaning

- Cleaning of the bulk milk tank is critical. Most tanks have an automatic cleaning system. Ensure a recommended bulk tank sanitiser is used for your particular type of tank.
- Many tanks require use of caustic solution (alkaline) alternated with acids to prevent milk stone build up. If the bulk tank is not thoroughly cleaned, bacteria that can multiply at refrigeration temperatures can cause rancid off-flavours. Refer to DAERA AfIB guidance notes on Effective Cleaning of Bulk Milk Tanks.

Bulk Tank Refrigeration

- Regularly check that the bulk milk tank refrigeration is working properly. Milk must be cooled to 6°C or below (preferably 2-3°C) within 2 hours of milking. Many farms use plate or tubular coolers to pre-cool milk. This reduces cooling time and bacterial growth in the milk.
- Alternate day collection is now the normal practice. If failure of the tank refrigeration occurs and milk temperature rises above 6°C, notify your milk purchaser immediately before collection. Sour milk can contaminate and taint a tanker compartment or full tanker load.

3. Feeding Stuff Taints

- Taints may arise from feeding stuffs. These should never be stored in the dairy either loose in containers or in bags. Compound feeds have a strong smell and this can be absorbed by milk from the atmosphere.
- Certain weeds are known to flavour milk if the herd has had access to them in large quantities particularly mayweed and wild garlic.
- Feeding particular crops and their by-products may cause problems. Ensure your milking herd does not have the chance to eat excessive amounts of kale, turnips, sugar-beet tops, and apple pumice or distillers grains.
- Butyric silage may cause taints especially when fed immediately before milking.

Milk processors require a high quality, unadulterated raw milk supply in order to produce high quality milk products. If you think your milk supply may be tainted, contact your milk purchaser immediately, before your milk is collected, and leave a clear notice on the tank telling the driver not to collect the milk.

Check that you have appropriate farm insurance cover as disposing of your own bulk tank or tanker of milk will be a costly event.

For further information contact your local DAERA Milk Inspector:

www.daera-ni.gov.uk/articles/complying-hygiene-regulations-dairy-farms

January 2021