



DAIRY SECTOR FACT SHEET ON COMMON DEFECTS IN CHEESE *

Problem	Causes	Prevention
High moisture in cheese could result in: <ul style="list-style-type: none"> <input type="checkbox"/> Highly acidic flavour <input type="checkbox"/> Weak, pasty, sticky, soft body with open texture 	<ul style="list-style-type: none"> <input type="checkbox"/> Slow acid development <input type="checkbox"/> Rapid scald <input type="checkbox"/> Insufficient scald <input type="checkbox"/> Poor whey drainage <input type="checkbox"/> Low pressing pressure/time combinations 	<ul style="list-style-type: none"> <input type="checkbox"/> Allow more acidity <input type="checkbox"/> Slower scald <input type="checkbox"/> Increase scald time and temperature <input type="checkbox"/> Increase pressing pressure/time combinations
Low moisture in cheese could result in: <ul style="list-style-type: none"> <input type="checkbox"/> Dry cheese <input type="checkbox"/> Body firm and hard <input type="checkbox"/> Texture curdy, crumbly <input type="checkbox"/> Slits 	<ul style="list-style-type: none"> <input type="checkbox"/> Low fat <input type="checkbox"/> Too much Rennet <input type="checkbox"/> Cut too small <input type="checkbox"/> Acid development too fast <input type="checkbox"/> Scald too high <input type="checkbox"/> Over salted <input type="checkbox"/> Excessive stirring, combinations of speed of stirring and time <input type="checkbox"/> Too high pressures applied during pressing. 	<ul style="list-style-type: none"> <input type="checkbox"/> Standardize milk fat <input type="checkbox"/> Reduce rennet, or set time <input type="checkbox"/> Larger cut <input type="checkbox"/> Lower scald <input type="checkbox"/> Drain at lower acidity <input type="checkbox"/> Reduce salt <input type="checkbox"/> Lower stirring, combinations of speed of stirring and time <input type="checkbox"/> Lower pressures applied during pressing.
Maximum acidity in cheese too high (over acid):	<ul style="list-style-type: none"> <input type="checkbox"/> Milk acidity too high <input type="checkbox"/> Too much moisture <input type="checkbox"/> Salting too late or too little. <input type="checkbox"/> Too much acid development before pressing. <input type="checkbox"/> Too warm during or immediately after pressing. 	<ul style="list-style-type: none"> <input type="checkbox"/> Reject suspected milk <input type="checkbox"/> Scald higher <input type="checkbox"/> Add more salt in correct time <input type="checkbox"/> Control curd temperature before and during pressing
Maximum acidity in cheese too low (low acidity)	<ul style="list-style-type: none"> <input type="checkbox"/> Antibiotics <input type="checkbox"/> Low moisture content <input type="checkbox"/> High salt 	<ul style="list-style-type: none"> <input type="checkbox"/> Reject suspect milk <input type="checkbox"/> Lower scalding <input type="checkbox"/> Lower salt
Curdy (chippy) body	<ul style="list-style-type: none"> <input type="checkbox"/> Low fat <input type="checkbox"/> Lack of acid <input type="checkbox"/> Scald too high 	<ul style="list-style-type: none"> <input type="checkbox"/> Standardize milk <input type="checkbox"/> Higher acidity <input type="checkbox"/> Lower scald
Greasy	<ul style="list-style-type: none"> <input type="checkbox"/> Temperature too high during pressing or ripening 	<ul style="list-style-type: none"> <input type="checkbox"/> Lower temperature during pressing and ripening
Mechanical holes	<ul style="list-style-type: none"> <input type="checkbox"/> Absorption of air during pre-pressing or whey level that is too low. <input type="checkbox"/> Cooling the curd too fast during pre-pressing <input type="checkbox"/> Pressing systems may result in poor knitting of the curd grains and too many holes <input type="checkbox"/> Pressure is too high <input type="checkbox"/> Pressure is too low <input type="checkbox"/> Rough handling of the pre-pressed cheese 	<ul style="list-style-type: none"> <input type="checkbox"/> Pre - press under whey <input type="checkbox"/> Press warm curd <input type="checkbox"/> Adjust pressing system, pressure and handle pre-pressed cheese with care.

* **References**

- 1) Grading, Packaging and Labelling, Agriculture, Trade & Consumer Protection, Chapter ATCP 81, Wisconsin Administrative Code, Register, October, 2004, No. 586. Wisconsin, USA.
- 2) Continental Cheese Types, 4th revised edition, March 2002. Chr. Hansen, DK.

Problem	Causes	Prevention
Bleaching	<input type="checkbox"/> Acid too high	<input type="checkbox"/> Lower acidity
Mottling	<input type="checkbox"/> Uneven acid formation <input type="checkbox"/> Uneven salting <input type="checkbox"/> Mixing cheese from different vats	<input type="checkbox"/> Control acid development <input type="checkbox"/> Control salting <input type="checkbox"/> Avoid mixing cheese from different vats
Contamination of milk, curd and cheese could result in: <input type="checkbox"/> gassy texture, blowing <input type="checkbox"/> bitterness, off, fruity / yeasty flavours	<input type="checkbox"/> Contaminated milk <input type="checkbox"/> Unhygienic practices during cheese making and ripening <input type="checkbox"/> High moisture content <input type="checkbox"/> Low salt and acid of the curd <input type="checkbox"/> High temperature in ripening room	<input type="checkbox"/> Reject suspected milk <input type="checkbox"/> Apply good hygienic practices <input type="checkbox"/> Control salt, acidity and water content of the curd <input type="checkbox"/> Lower ripening temperature

Note: For definition of the various terms used in this fact sheet please refer to the glossary below.

GLOSSARY ON DEFECTS IN CHEESE

Body and Texture

- Coarse** - the cheese is rough, dry and sandy to the touch.
- Corky** - cheese texture that is hard, tough and overly firm.
- Crumbly** - cheese is loosely knit and tends to fall apart when rubbed between the thumb and fingers.
- Curdy (chippy)** - cheese is smooth but firm, and when worked between the fingers, is rubbery and not waxy.
- Early blowing** - usually occurs within 48 hrs of the cheese-making and appears as small, spherical, shiny holes. The defect is often associated with unclean flavour.
- Doughy cheese** - sticks to the palate and teeth when eaten.
- Firm** - the body of the cheese feels solid and is not soft or weak.
- Gassy** - cheese contains gas holes of various sizes which may be scattered or unevenly distributed throughout the cheese.
- Huffed** - cheese is swollen because of gas fermentation and has become rounded oval in shape rather than flat.
- Late blowing** - usually occurs during the ripening process of the cheese, most often after a minimum of three weeks storage and is primarily.
- Open** - irregularly shaped mechanical openings, caused by workmanship and not gas fermentation.
- Mechanical holes** - holes of irregular shape caused by trapped whey.
- Pasty** - cheese has a weak body, and it becomes sticky and smeary when rubbed between the thumb and fingers.
- Pinny** - presence of numerous and very small gas holes in the cheese.
- Short** - there is no elasticity to the cheese plug removed by means of a grading trier, and the plug tends toward mealiness when rubbed between the thumb and fingers.

- Seamy** - presence of white thread-like lines that form if the pieces of curd are not properly joined together.
- Slitty** - cheese contains narrow, elongated slits which are generally associated with a cheese that is gassy or yeasty. Slits in cheese having this characteristic may sometimes be referred to as fish eyes.
- Sticky Cheese** - sticks to the palate and teeth when eaten.
- Too elastic Cheese** - too elastic and binds without fracturing.
- Weak** - cheese requires little pressure to crush and is soft but not necessarily sticky like a pasty cheese.

Colour

- Acid-cut** - bleached or faded appearance which sometimes varies throughout the cheese but is present most often around mechanical openings.
- Bleached surface** - a faded colour begins at the surface of the cheese and progresses inward.
- Mottled** - presence of irregular shaped spots or blotches in which portions of the cheese are light coloured and others are darker in colour, or an unevenness of colour due to mixing or combining the curd from 2 different vats.

Flavour

- Acid** - the cheese is sharp and puckery to the taste or has a taste which is characteristic of lactic acid.
- Bitter** - a distasteful flavour characteristic of quinine which is most frequently found in aged cheese varieties.
- Flat** - an insipid flavour or one which is practically devoid of any characteristic cheese flavour for the applicable variety.