ABSTRACT

Beer quality can suffer at all stages from the grain to the glass if insufficient attention is given to its maintenance. Perhaps the weakest links in the chain occur where the product passes beyond the brewery gate and out of the hands of the brewer. Through an understanding of the factors which can impact on quality in-trade, brewing companies can take steps to ensure that their beer consistently meets consumer expectation.

In response to requests to solve trade quality problems, to refute negative anecdotal quality reports or to substantiate quality claims, Brewing Research International (BRI) has studied the quality of both small-pack and draught beer in-trade as presented to the consumer. This paper describes the objective approach taken using a series of case studies. The sensory impact is measured with reference to a benchmark and those quality aspects considered include appearance, flavor, serving temperature, glass container quality together with brand font / brand pack presentation.

Our studies have identified many of the factors that can impact on in-trade quality as perceived by the consumer. They include enhanced customer expectation, market place changes, distribution parameters and the nature of the drinking environment. It has been observed that whilst local conditions occasionally create specific one-off problems the major issues described in this paper are experienced globally.

Keywords: consumer, quality, point of sale, brand

INTRODUCTION

The reputation of a beer brand is based on the consumers perception of both its intrinsic and extrinsic values. The former encompasses the sensory qualities of both the liquid and its package and the latter includes lifestyle associations. To ensure a brand has a long and healthy life-span, it is essential that consumer expectations with regard to both these values are met.

Throughout the world consumer expectation of beer quality is high and continues to be raised either directly by brewing company claims or indirectly through reference by the consumer to higher standards of quality experienced. In recent years marketing has focussed consumers attention on freshness. The consumer has been educated that fresh beer can be equated with quality beer. This message has also been emphasised to distrib-

SINTÉSIS

La calidad de la cerveza puede sufrir en cualquier etapa de su elaboración desde el grano hasta el vaso en que se toma sino se presta suficiente atención a su mantenimiento. Probablemente el eslabón más débil de la cadena ocurre cuando el producto sale de la puerta de la cervecería y fuera de las manos del cervecer. Mediante el entendimiento de los factores que pueden impactar en la calidad, las compañías cerveceras pueden tomar medidas para asegurar que sus cervezas cumplan consistentemente con las expectativas del consumidor.

En respuesta a las peticiones de resolver los problemas de calidad, de refutar los reportes de calidad negativos o de sustanciar demandas de calidad, el Brewing Research International (BRI) ha estudiado la calidad de la cerveza en envase o de barril como se presentan al consumidor. Este documento describe el acceso objetivo que se toma usando una serie de casos estudiados. El impacto sensorial es medido con referencia a una marca y los aspectos de calidad considerados incluyen la apariencia, el sabor, la temperatura de servido, la calidad del contenedor de vidrio junto con la presentación de marca de enfrente y de atrás.

Nuestros estudios han identificado muchos de los factores que pueden impactar la calidad como es percibida por el consumidor. Estos incluyen la expectativa del consumidor, los cambios del mercado, los parámetros de distribución y la naturaleza del ambiente en que se consume. Se ha observado que las condiciones locales pueden causar ocasionalmente problemas específicos de los temas más importantes que se describen en este documento y que se experimentan globalmente.
The rise and fall of cask and nitrogenated keg beer in the United Kingdom illustrates the indirect effect on consumer expectation. When nitrogenated keg beer (nitrokeg) was first introduced it was designed, amongst other things, to mimic the appearance attributes of cask beer, to have a surge or reflux on initial pouring and more particularly to have a small bubbled creamy foam, yet be easy to handle in the cellar. However, the situation has turned full circle and nitrokeg now serves as a quality benchmark which consumers use to reference cask ale. Nitrokeg beers are consistently brilliantly bright (0.6°EBC or less) and the consumer has now come to expect the same in cask beer where previously bar bright clarity (1.0-2.0°EBC) was acceptable.

Good quality beer can be ruined by lack of care on the part of the distributor, retailer or publican/bar owner. This can lead to a negative response from the consumer and subsequently have a serious effect on the asset value of the brand. However, steps can be taken by brewing companies to ensure that their beer does perform well in trade but first they have to understand the nature of the issues which face them. This means setting up a well structured, hands-on study of the brand as it is perceived by the consumer under trade conditions.

There are two key issues to be addressed in such a study. Firstly, the work must be carried out by an independent, well-trained, authoritative organisation who have the trust of both the company marketing function (brand custodian) and the operation function (brand producer). Secondly it is important to achieve a sound, statistically significant result by ensuring a large enough sample is taken. For example, this may require the assessment team to visit up to 150 bars over a short period of time. Stamina within the team is essential—especially if flavor assessment is involved!

Using case studies, this paper describes an objective approach to monitoring the quality of both draught and small pack beer as presented to the consumer.

**METHODS**

This approach was developed in response to the need expressed by brewing companies to measure quality in-trade with a view to either substantiating quality claims or refuting negative anecdotal quality reports. The approach taken in each study has basically been the same.

An independent objective approach has been adopted throughout and quality is measured with respect to a specific reference point. Before any study is undertaken, the benchmark against which quality is to be compared is established. On occasions the reference used is the brand leader in the sector being studied but principally it is a specification set by the brand owner. For example, this may include brand specific characteristics such as reflux time or depth of foam.

Various quality aspects are described and these include appearance (foam, colour and clarity), flavor (aroma, taste and aftertaste) packaging and dispensing environment. The latter can include serving temperature, drinking vessel quality, font presentation and pouring technique. The quality aspects selected for any one study depend on the beer format, draught or small pack, and the nature of the study. An example of a proforma used in studying the impact of toughened drinking glasses is given in Figure 1. In this case we were asked to refute or substantiate anecdotal evidence that drinking vessels made with this glass had a negative impact on foam quality. Consequently we concentrated only on the appearance attributes.

**Sample:**

**Date:**

**Serving Temperature:**

<table>
<thead>
<tr>
<th>Foam Depth (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam Evenness (0 = coarse 9 = smooth)</td>
</tr>
<tr>
<td>Bubble Size (0 = large 9 = small)</td>
</tr>
<tr>
<td>Beading (0 = absent 9 = sparkling)</td>
</tr>
<tr>
<td>Foam Stability (% remaining)</td>
</tr>
<tr>
<td>Lacing (% of glass covered)</td>
</tr>
</tbody>
</table>

**FIGURE 1**

Visual assessment proforma used in the study on the affect of toughened drinking glassware on foam quality. The foam depth was measured immediately on pouring, foam texture (evenness and bubble size) 30 seconds after pouring, beading 1 minute after pouring, foam stability 2 minutes after pouring and lacing once the foam stability observation has been made and the beer poured away in a consistent manner.

The data are either recorded in the traditional way using pen and paper or input directly into a computer. Hand held computers are currently being evaluated and should, if they prove successful, make the recording of data much easier in covert studies.

Wherever possible, the quality observed is described in a quantitative as well as a qualitative manner. In some instances, specific quality aspects have been felt to be more important than others in the perceived quality, an example being the serving temperature of draught beer. The scoring systems are weighted accordingly.

The assessors are trained to evaluate each quality attribute under consideration with particular reference to the specific benchmark. Depending on the nature of the study, the quality evaluation is carried out at the point of sale itself or using the dedicated sensory suite at BRI (Figure 2). The observations made at the point of sale are generally made covertly but can be part of unannounced visits accompanied by company representatives.
es a boothed tasting room with Compusense sensory soft­
ware, training room, preparation area, dispense facility and

cellar.

The Brewing Research International sensory suite compris­
glass cleanliness, reflux or surge, foam quality, clarity and fla­
country and, with reference to a benchmark flavor profile and
licipal cause of the problem was identified as lack of care by the
made by a drinker that "x doesn’t travel well".

A covert study was conducted in numerous outlets across the
country and, with reference to a benchmark flavor profile and
dispense specification, the following quality aspects were mea­
sured: serving temperature, pouring technique, sparkler type,
glass cleanliness, reflux or surge, foam quality, clarity and fla­
or. Concurrently, at outlets where the key competitor was also
on sale, it too was evaluated. A quality score for each outlet vis­
it was obtained. If the outlet served cloudy or undrinkable
beer it was deemed to have failed and appropriate action was
taken by technical representatives to redress the situation within
twenty four hours.

The anecdotal evidence was substantiated in part; the beer
quality in trade did not match the benchmark. However the prin­
cipal cause of the problem was identified as lack of care by the
publican once it had arrived at its destination.

The brewery took a two pronged approach to resolving its
problem. An education programme for the publicans was insti­
tuted and the robustness of the brand addressed so as to make it
easier to handle in the cellar.

Interestingly, this study also highlighted that the dispense
specification supplied by the client did not actually meet the

consumers expectation. The specification stated a 1–1.5 cm
head whereas in reality the majority of beer was served with a
head of less than 1cm – a response to consumer demand for a
full measure [21],

An additional spin off to this exercise for the brand owner
was, that its key competitor exhibited even greater inconsistency!

Case Study 2 – Bottled Beer Africa

An African brewer who monopolised its home market was
faced with the threat of new competition from an international
brewer. The most immediate concern to the brewer was the stan­
standard of package presentation maintained by the prospective com­


cpetition. A survey of bottled beers in the on-trade was conducted
across the country. The emphasis was placed on measuring aspec­
t of pack presentation which included bottle integrity, crown cork condition and label quality and positioning with
respect to the standards set by the competition.

The survey concluded that the bottle presentation was unac­
ceptable, too high a proportion of the bottles presented with one
or more of the following faults: scuffing, chipped necks, rusty
crown corks, torn and incorrectly positioned labels.

Particular emphasis was also placed on how the beer per­
formed when served chilled - once again being measured against
the performance of the international competitor. Up until that
point in time the majority of the beer had been served at room
temperature in contrast to the chilled serving temperature
favoured by the competitor. The beer itself performed well in
terms of appearance and flavor quality across the serving tem­
perature range encountered. An additional problem in pack pre­
sentation was however identified; on chilling, the glue attaching
the labels was no longer adhesive and the labels slipped off –
worse still as the labels slipped the bottles could be dropped.

The brewery took immediate action with respect to the label
adhesive, sourcing an alternative. In addition a new system of
checking bottle presentation was introduced within the brewery
to prevent poorly presented bottles actually reaching the con­
sumer. In the longer term, plans were laid to increase capital
investment in new bottling lines.

Case Study 3 - Canned Beer Pacific Rim

The demand for one brand from a local market in the Pacific
Rim was such that the beer was sourced from two separate brew­
eries in nearby countries. The consumers complained of incon­
sistency. Each brewery however felt they were producing a good
quality beer with the correct profile and the situation was not
addressed until sales began to suffer. A study was conducted
independent of the two breweries concerned; representative sam­
ples of beer from each brewery were taken from the market place
and the flavor compared to the “true-to-type” flavor profile sup­
plied by the brand owner.

The customer complaints were substantiated. The brand own­
ers ensured that steps were taken within one of the plants to min­
imise the flavor differences that were apparent. The most
important lesson learnt from this study was that consumer com­
ment should be addressed as quickly as possible. Contrary to
popular opinion, consumers do have discerning palates and the
time taken to restore consumer confidence once it is shaken is
often far greater than the time taken to implement a technical
solution to the problem.
Case Study 4 – Draught Keg Beer UK

Trade complaints were received from a number of sales outlets that a keg beer had a strange fuel-like taste. The brewers were at a loss to explain this as they had tasted the bright beer before packaging and a representative keg before release to trade; on both occasions the beer was found to have an acceptable flavor.

The aroma of beer from affected kegs was compared to that of unaffected beer and the nature of the taint identified; the consumer description of fuel was supported. Specialist analyses established the presence of substituted napthalenes, a component of diesel fuel. It was subsequently discovered that diesel had been stored by a bar owner in a number of kegs. The problem kegs were rapidly traced and the problem contained; a product recall was not necessary. This case highlights how unforeseen hazards can have a serious implications.

As a result of this experience, steps were taken to make it harder for publicans to tamper with containers, thereby restricting their use as storage vessels for anything other than beer. The case was also publicised by the publicans trade association to raise awareness within their membership of the implications of unwittingly contaminating kegs.

Case Study 5 – Toughened Drinking Glasses UK

Anecdotal reports indicated that draught lager with an alcohol content of less than 4% by volume had poor foam presentation when served in drinking vessels made out of toughened glass. Such glasses had been introduced to prevent injury if fighting broke out and had become a legal requirement for some city center pubs in order for them to retain their licences to sell alcohol. A standard 4% abv lager with the potential to give a foam, as demonstrated by the Rudin test, was selected and dispensed under controlled conditions into both toughened and non toughened drinking glasses. The following five aspects of foam quality were measured by an appearance panel; texture (creamy or coarse), bubble size (small through large), stability (% foam remaining three minutes after pouring completed), lacing ( % of glass surface covered by foam after the beer has been consumed) and beading (bubbles in the body of the beer).

The study revealed that the amount of beading observed was significantly less when the beer was served in the toughened glassware and consequently any foam formed on pouring was not sustained. It has been postulated that the observed differences are a function of the smoothness of the glass surface; the toughened glasses having less nucleation sites.

A statistically significant difference in the amount of beading was observed when a 4% abv lager was dispensed into toughened and non toughened glassware.

The claims of poor foam presentation were substantiated and once again an unforeseen hazard, in this instance a change in local legislation, had affected beer quality. The brewers who had instituted the study are currently in discussion with the glassmakers. Alternative options to resolve this problem include the use of nucleated glasses where the inner surface of the drinking glass has been “treated” in some way, for example through etching or by the fusion of glass particles to give nucleation sites for bubble formation.

DISCUSSION

From the studies undertaken, it is apparent that the problems with point of sale quality occur globally. Various factors have been identified which can impact on quality in-trade as perceived by the consumer; these include raised consumer expectation, market changes, legislation and product sourcing.
Consumer expectation will continue to increase as marketeers strive to communicate superior, more esoteric, special or specific extrinsic values. It is essential that the intrinsic quality matches the expectation generated by these image values. There are new, powerful techniques available to market researchers to help measure “brand image” versus “sensory perception” and they must be employed regularly. A deliberate change to brand image (which marketeers are prone to do) may well mean that the intrinsic quality of the beer may have to be subtly adjusted to preserve the all important relationship.

Changes in the market place driven by, for example, innovation, discretionary spending, environment or competition, have been a feature in the past and will continue at an increased pace. Consumer perception will be influenced by these changes. It is important to be flexible and reactive to take account of such changes. From the brewers perspective it is important that they continue to have a major input into the organisations knowledge management. Research and development - currently out of fashion with many brewers - is a sound investment when it affords the brewer with a quick answer to a market place change. We are of the opinion that innovation spending will soon begin to increase as the major players begin to experience a knowledge shortfall.

New legislation which affects the consumers drinking environment – and thus their perception of quality – may not have been a regular occurrence in the past but we can almost certainly expect more in the future. Trading standards, health claims, safety constraints and excise issues will continue to have an impact on the consumers perception of brand quality. It is increasingly becoming important to set up studies, pilot trials etc to gauge the impact of such legislation on consumer perception before the laws are implemented. Such change is not all bad news – it may afford opportunity for innovation and a positive consumer reaction.

CONCLUSION

Be vigilant and ensure that your consumers’ expectations are met through continuous monitoring and review of quality as presented in-trade. And communicate the expected quality standard company-wide and also to distributors and retailers.

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