INNOVATION IN BREWING

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Brewing is known as one of the oldest industries stretching back centuries into history. Because of its age, the brewing industry is seen as being very traditional with brewers preferring to stick to the well-known processes. Indeed, most business analysts view brewing as a very conservative industry, with little in the marketplace to demonstrate product innovation aligned to changes in taste and the social culture. Unfortunately, these same analysts fail to recognize the large leaps these brewers have in applying control technologies and manufacturing philosophies to reduce production costs and shareholder value.
However, the fact remains that most beer consumers expect beer to look, feel and taste like beer, with a consistent fresh flavour of high quality, and it is this acknowledged consumer expectation which partly restrains the brewers' will to use dramatically different materials, processes and procedures. If consumers like drinking beer, why change? As we say, 'why change a winning horse!' The other reason for restraint is the financial risk involved when changing major process steps in the brewery. Other industries, the cosmetics industry in particular, can afford very large R&D costs as these can be recovered in the high sales price customers are willing to pay in their pursuit of everlasting good looks. Beer is a relatively cheap drink, cheaper than water in many cases, and accessible to all classes and income levels. The relatively low margins brewers get thus severely restrict R&D costs and hence the successful large scale application of innovative technologies required to produce innovative new drinks.

However, the environmental changes we are all starting to witness, the rapid change to an aging population and continuing population growth mean that brewers, if not already doing so, will soon be forced to look into alternative brewing materials, processes and procedures. Increasingly, Northern European suppliers with core markets outside of brewing have shown a will to invest in innovation and re-think the brewing process.

Brewers, for example, might never admit to preferring to brew using enzymes derived from bacteria or moulds, but the fact is that it is almost impossible to find a medium to large scale brewery that does not already have enzyme solutions on site and in regular use. While the use of enzymes is now universally accepted, the enzymes produced directly from genetically modified organisms or from their growth substrates are still a no-go for many brewers promoting the wholesomeness of their beers through a message of 'tradition' and 'finest malt, hops and water'. This message may have to change as the general trend is for the increasing use of adjuncts due to both the cost and supply availability.

To illustrate this trend, in Europe, the use of un-malted barley to replace a portion of the malt is becoming increasingly popular. Sorghum has for some years been used in Africa and, recently, the Cassava root has been suggested as a cheap and easy available source of extract. As the Cassava root is grown widely in Africa and South America, it is available as a brewing adjunct for a large part of the global beer market. For years, the Japanese Government has promoted the use of adjuncts for brewing of beer-like products by lowering tax for alcohol beverages with a malt content lower than 50 per cent. These products are referred to as Happoshu as the Japanese Government defines a beer as having a malt content above 67 per cent. A new 'beer like' product generally referred to as '3rd category beer' also has a low malt content with a portion of distilled alcohol added during filtration. The lower tax and thus lower sales cost make it a popular product for the consumers and the breweries. The Happoshu brewers have broadened the definition of beer as they have shown it is possible to brew products with high adjunct content of good quality and flavour similar to beer.

Finally, by 2050 the population of the world will have passed nine billion, and reports suggest that global production of food will need to be increased by 70 per cent. This will obviously result in the reduction of crop production areas for purposes other than directly for food. Already, the use of wheat for bio fuel is questionable as to whether it is a sustainable proposition. The use of waste products from the production of barley and other crops may soon find use as a source of fermentable extract.

Being innovative is always at the risk of the market and consumers not being ready for the change. Being both a consumer and a member of the brewing industry, I welcome new ideas, products and procedures and look forward to witnessing the coming changes to the industry.

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