WHAT IS BEER?

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Recently, Novozymes and Danisco have made it possible to use 100% unmalted barley in the production of beer. The process is possible by the use of what I call industrially designed enzymes. Whether these are produced in natural or genetically modified organisms, and/or they are genetically engineered enzymes remain questions to be answered clearly. However, the brewing process is that barley is milled and the enzymes are added during the mashing. That way, the barley converts directly to wort, eliminating the malting process. Being a brewer and a maltster, this development has made me ask the fundamental question: What is beer? There have always been new product developments in the beverage and fermenting industry. These add to the diversity of products, and we should welcome any new product. But I must protest when such a beverage is called 'beer'. Taste cannot be discussed. Anyone can drink and eat whatever he or she likes. Many Danes eat a barley based porridge called 'byggrød'. Now this porridge is produced in the mash kettle, and industrially designed enzymes are added to ultimately make a product sold as 'beer'. Try it!

I have heard producers of the enzymes state that they can meet the breweries' requirement for a so-called 'clean label', meaning that their use does not have to be stated on the label. The problem, however, is that in this way the content is hidden! Our requirement as brewmasters should be: 'clean contents for beer'. There is also the issue of reducing CO_2 emissions. Believe it or not, maltsters also work on saving energy and water, using waste heat for drying malt and buying windmill electricity, thereby doing their share to solve the global warming problems. The comparison of CO_2 emissions of beer produced from barley/enzyme mix and traditional malt is, so far, based on figures only from a preliminary stage and, thus, should not be taken as 'the gospel truth' until an international survey has been undertaken.

This brings me to the issue of consumer protection; in my opinion there must be 100% openness as to what has been used in the production and what is in the bottle. We should put everything required by any product into it, but we cannot live with hiding anything! This includes all ingredients, adjuncts, industrially designed enzymes, colours, flavourings, etc.

My dear brewing colleagues: Produce what the market wants and what people want to put into their mouth, but maintain the term beer for what it really is! If we do not protect beer, we could even skip the yeast and add alcohol from a cheap chemical synthesis to some flavours and foam supporting soy protein, and then call the mixture 'beer'...

Beer has been with us for hundreds, if not thousands, of years. It is a natural product consisting of natural ingredients. Despite its history, many consumers do not know what these ingredients are. Wine, another natural alcoholic beverage, which also has been with us for thousands of years, is much easier for the consumer to understand and define. So, I think it is the duty of us brewmasters to support a beer definition, thereby protecting and respecting our product. A guideline for a definition is already given by the WHO and FAO. They have in the codex alimentarius, a global reference point for consumers, food producers and processors, given a definition of beer (use Google and type the keywords: codex alimentarius 14.2.1 beer): 'Beer and malt beverages: Alcoholic beverages brewed from germinated barley (malt), hops, yeast and water. Examples include: ale, brown beer, weiss beer, pilsner, lager beer, oud bruin beer, Obergäriges Einfachbier, light beer, table beer, malt liquor, porter, stout and barley wine'.
In my world, this definition could be more specific by a requirement of using e.g. a minimum of 70% malt, meaning that up to 30% of the extract can come from other starch.

I expect industrially designed enzymes to play a big role with regard to the production of fuels from biomass. It makes no sense to exploit valuable farming areas and their edible crops for the purpose of producing fuels while starvation takes place in the world. Here, the tailor-made enzymes can become the saviours of our energy supply of the future. Imagine all the straw, waste wood and leaves to be collected and transferred to fuel our engines, but not in our beer. What we drink or eat as 'beer' should have a defined origin.

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