

# JACOBSEN ORIGINAL DANISH ALE

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The latest product from the Jacobsen Brewhouse is intimately linked to the 19th century and the brewing tradition of J.C. Jacobsen's father, Christen Jacobsen.

On 5 May, Jacobsen Original Danish Ale was launched as the culmination of an almost five-year project, which involved, in particular, Morten Ibsen and Jens Eiken; the current and the previous head brewer of the Jacobsen Brewhouse respectively. But a great number of specialists and experts, each with their knowledge and practical experience, have been involved. Generally seen, the objective throughout all five years has been to develop a unique Danish ale that would focus attention on the original Danish – and Nordic – raw materials and types of beers and, thus, challenge the dominance of especially Belgian and American beer styles and not least the raw materials they are brewed on.

Naturally, the launch of Jacobsen Original Danish Ale is a great piece of news to the Jacobsen Brewhouse. And

the news is certainly no less when you see it in the light of how product development normally takes place within Carlsberg, where research into raw materials normally is distinct from the development of the actual products. With Jacobsen Original Danish Ale, the two have been combined and the final result is therefore quite unique for Carlsberg Group as a whole.

## HISTORICAL 'WHITE' ALE

The historical approach to the creation of Jacobsen Original Danish Ale is the story of how Jacobsen Brewhouse have worked to recreate a Danish beer, as it could have looked and tasted like in the first half of the 19th century – that is, right before the breakthrough of the Bavarian lager. It was at a time when Carlsberg did not yet exist, but Christen Jacobsen, the father of J.C.



Jacobsen, made a living as brewer in Copenhagen with his own brewery in Knabrostræde and later Brolæggerstræde. Like his descendants, Christen Jacobsen was passionate and constantly seeking to improve his knowledge and professional skills. In 1807, he was noticed for the arrangement of his malt house, which meant that the malt never was in direct contact with smoke or soot. In 1826, he was the first Copenhagen brewer who consistently used a thermometer, thereby enabling reproducible mashing schemes and probably also a better understanding on how temperature affected the final extract. At the age of 56, just a few years before his death, he started attending the scientific lectures at the newly opened Polyteknisk Læreanstalt (Technical University of Denmark) searching for new inspiration, truly endorsing the modern concept of lifelong education. Here at the Jacobsen Brewhouse, we are in little doubt that Christen Jacobsen must have been rather exceptional for his time and geographical scope.

However, Christen Jacobsen only brewed top-fermented beer. His specialty was beer types such as 'brown beer', 'double beer' and not least 'white beer', which were all top-fermented. He never got to brew and taste bottom-fermented Bavarian lagers like the ones that later made his descendants famous. Actually, he died only three years before the first bottom-fermented beer was brewed at Kongens Bryghus (The King's Brewhouse) in 1838. As a consequence, we have naturally picked a top-fermenting yeast for Jacobsen Original Danish Ale. It is not a historical yeast as such, but a well-performing strain that especially has proved successful with English style ales and bitters.

Jacobsen Original Danish Ale is brewed with the 'white beer' (hvidtøl) of the past as a historical inspiration. Today, most people associate this type of beer with a dark, weak

beer, primarily consumed at Christmas. But in those days, it was actually pale and not necessarily weak. It was brewed with so-called *white malt*, which perhaps best compares to the traditional British pale malts of today. The similarity is not entirely coincidental, since there is actually a historical link. In the Renaissance, white malt was produced by means of either wind drying or in stove kilns, which in Denmark were only found at the King's and the nobility's own brewhouses. In other words, 'White beer' was exclusively for wealthy citizens. But in the second half of the 18th century, the situation changes, first in Britain and later in the rest of Europe. This was due to discoveries and technological breakthroughs; e.g. coke and welding, which went hand in hand with the incipient industrialisation. This made the 'white beer' much more available to the man in the street, as it simply got quicker and cheaper →





to produce white malt. And precisely Christen Jacobsen's new arrangement of his malt house in 1807 suggests that he was a pioneer in this development; therefore, it was natural to work with recreating Jacobsen Original Danish Ale as a 'white beer'.

#### DANISH LANDRACE HOP VARIETY

Christen Jacobsen knew the importance of using quality hops for his beers. He has known all about

the unique taste balancing and preserving abilities of hops.

Historically, German hops have long been considered superior to Danish hops, hence for centuries, hops have been imported from Brunswick, and later also Bavaria. But from historical sources, we know that Christen Jacobsen was very conscious of the fact that fresh hops were better than old hops. Bales of imported hops could easily become cheesy before they reached final destination and it is certainly not inconceivable that Jacobsen would supplement the imported German hops with fresh ones picked from local hops yards.

The hops used in Jacobsen Original Danish Ale are of the variety *Hallertauer Jacobsen*, which is, in many ways, a meeting between exactly Danish and German hop. The development of the hop variety dates back to before World War I, where Øjvind Winge (1886-1964), later professor, began his studies of hop plant genetics and physiology at the Carlsberg Laboratory. He identified ten hardy, Danish landrace hop varieties that stood up well against the Danish wind and weather and, thus, could compete with the imported Bavarian hops. For different reasons, the project was wound up during the 1950s, most likely because no one were able to handle hop-growing within the country borders anymore. But Øjvind Winge's notes and not least his hop plants did not vanish from history entirely. In 2004-5, they were rediscovered in an old hop garden situated behind the Carlsberg Research Centre in Copenhagen and it was decided to use these hop plants for the project. First, rhizomes were extracted and, secondly, a partner for the cultivation was found. Jens Eiken, leading the hop project, chose to collaborate with the farmer Per Kølster, and the rhizomes were planted at his farm, Fuglebjerggaard, north of Copenhagen. After a critical selection procedure, they chose to pursue with the hop plant that became known as Winge no. 5. Next step was to enter a partnership with one of the world's leading hop producers, Hopsteiner, which could assist in making the hop plant virus-free, etc. In 2007, the hop plants were finally planted at the farm of hop grower Hubert Grabmaier, who is denominated by professionals as the best hop grower when it comes to old, vulnerable hop varieties. In late summer 2008, we harvested around 350 kilos of hops, which equates to approximately 200 kilos of hop pellets. It is hops from the 2008 harvest we have used in Jacobsen Original Danish Ale.

#### OLD DANISH BARLEY VARIETY

Just as it has been pivotal to find an original Danish hop variety, it has also been essential to use Danish barley as

it could have been grown and used in the first half of the 19th century. The choice fell on the barley variety *Gammel Dansk* (Old Danish). This barley variety disappeared concurrently with the introduction of varieties with a higher yield in the 20th century, and therefore the variety was almost lost. Luckily, there is a longstanding tradition in Denmark, and in Scandinavia in general, of conserving seeds and plants in order to maintain biodiversity. As a result, it has been a relatively easy operation to procure seed grain from NordGen, which is particularly known today for possessing the world's largest collection of historical plant seeds in their perma-frozen seed bank on the Norwegian island of Spitsbergen. For the cultivation of the barley variety, an arrangement was made with the grower Hans Jørgen Nielsen from the island of Funen. Hence, it was in his good soil that we finally could grow the grain in an adequate quantity, and in late summer, 2008, he harvested about two tonnes of barley, which is enough for approximately 5,500 litres of Jacobsen Original Danish Ale. First, the barley had to be malted, and for this we partnered up with Kronenbourg specialty malt house in Strasbourg, which could malt the grain as 'white' malt. It should be noted that, in principle, we could produce the malt in Denmark, but with the relatively small amounts that we needed, it made more sense to make use of the smaller facility of our French colleagues.

### BREWING OF HIGH QUALITY

In continuation of our desire to brew a beer as it may have tasted in the time of Christen Jacobsen, it has naturally been important to aim at a historical procedure in the brewhouse. A special 'Copenhagen Ale Brewery' mashing programme was developed in which the temperature is raised gradually from 60 °C to 78 °C. Today, these temperature rises are entirely automated, but in Christen Jacobsen's brewhouse the mashing was carried out over several stages, where mash were taken

out and heated separately, before being added again and, thus, raising the temperature of the entire mash.

Another important point in the brewing is the addition of hops. As previously mentioned, Christen Jacobsen knew all about the preserving abilities of hops and he has also known that a large quantity of hops was better than a small amount when it comes to avoiding acidification, etc. It was often on the basis of the used amount of hops that one could tell the quality-conscious breweries from the less quality-conscious ones. We permitted ourselves to belong to the quality-conscious and used plenty of our good hops, Hallertauer Jacobsen. Most of the hops are added in the beginning of the wort boiling as bitterhops, then a smaller amount of hops are added as aroma hops. As something special, we have added hops in the whirlpool. This method was of course not used in the days of Christen Jacobsen, but in a historical perspective one can compare it to the stage where the beer was cooled before pitching the yeast. It was, as it is now, the most vulnerable time for the beer, and to Christen Jacobsen it would have been natural to add more hops in order to minimise the risk of infection. Finally, we also added hops after fermentation as dry hopping. This was also customary in the days of Christen Jacobsen, where hops were added to the beer in the casks, before being sent to the public houses just as it is now with cask conditioned ale in Britain. ☞

### ABOUT JACOBSEN ORIGINAL DANSK ALE

- ABV: 6.0%
- Jacobsen Original Danish Ale is a limited edition, which means that it will not be in general distribution. It is served at the Visitors Centre bar, and sold in the souvenir shop only.
- Approximately 5,000 bottles and 100 kegs, each containing 25 litres, have been produced.