

THE ORVAL BREWERY: A PHOTO ESSAY

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The Orval brewery is a Trappist Brewery located in the Abbaye Notre Dame D'Orval in the south of Belgium. Modern brewing at the monastery dates from 1931, though it's likely brewing had been carried out previously going back to medieval times.

Legend has it that the widowed countess Mathilda of Tuscany lost her wedding ring by dropping it into a lake. She prayed to God for its return and soon enough a trout soon rose to the surface with the ring in its mouth. She exclaimed 'This place truly is a "val d'or"', meaning 'golden valley', and established a monastery on the site known as Orval. The trout with the ring in its mouth remains the symbol of the abbey.

The first monks arrived in 1070, though they may have had some difficulties as the first church was not completed until 1124. It's likely that brewing was carried out on the site, and there is certainly evidence of brewing from long before the current brewery, including an account from a visitor over 300 years ago.

To provide funds for the abbey the modern was established in 1931, and from the outset employed lay staff. Though the first head brewer was a German called Pappenheimer English brewing practice influenced the beer with infusion mashing and dry hopping being employed. It's thought this probably came from a Belgian employee, John Vanhuele, who had lived in England for many years.

The current impressive looking brewhouse was built in 2007. There are gleaming copper vessels, a glass floor and small lights in the ceiling that give the appearance of stars. It's a wonderful looking place.

The copper vessels were not quite what they appear though, as they are shells covering stainless steel vessels. The grist for Orval is pale malt (50% proanthocyanadin free), cara malt and a small amount of black malt (one 25kg sack per 280hl!). It's wet milled at 62°C. They mash at 60°C for one hour, then 72°C for 20 minutes. Hop extract is added in the copper and some hop pellets are added to the lauter tun as an antioxidant.

After boiling the beer is centrifuged, liquored back and cooled to 17°C. Oxygen is added to 10ppm and yeast pitched at six million cells per ml. Sucrose is added after cooling, raising the gravity from 1.042 to 1.054.

It takes six hours to do a brew and they brew five to six times a week. The water is treated with reverse osmosis and the CaCl₂ and CaSO₄ are added to 'mid level'. The wort has 50 IBU and the beer 32-35. The beer spends five days in the fermenter, starting at 16°C, rising to 24°C. Fresh yeast is propagated for each brew, and it skips the lag and gets straight on with the exponential phase. The beer is fermented down to 1.004 before bottling and drops to 1.000 after the *Brettanomyces* yeast has done its work.

They have their own bottling line which works fine despite their skittle shaped bottles. The beer is dry hopped with bags of whole Strisselspalt hops in conditioning tanks, for between 10-20 days at 15°C.

After conditioning the beer is centrifuged, filtered, primed with sugar and re-seeded with yeast to 3 million cells per ml. *Brettanomyces* only makes up 1% of the yeast used for re-seeding. The beer is carbonated to 5g/l

before bottling and will rise to 9.5g/l in the bottle. Nitrogen is added to the beer to 15ppm to improve the head. It's also used for counter-pressure in the filler and liquid nitrogen is used for over foaming on capping.

At Orval they brew the same amount each week, all year round. There are no plans to expand production so supplies are limited, even to the extent that sales from the brewery shop are rationed. It's still a large operation though: they can condition 17,000 cases at a time (at 17°C for a minimum 3 weeks).

The monastery has a restaurant, where it is possible to try their *patersbier*, a weaker beer (4.5% ABV) made for the monks which they only sell here. The beer has a very fruity flavour without the distinctive *Brettanomyces* influenced 'gout d'Orval' (taste of Orval) of the main brand.

Photographs by page:

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p.58 bottom - Close-up of an open copper-clad stainless steel vessel

p.59 top - The old brewing vessels
p.59 bottom - An old copper brewing vessel

p.60 top - The fermenters
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p.61 top - Bags of whole Strisselspalt hops
p.61 bottom - The conditioning tanks

p.62 top - A filter and centrifuge
p.62 bottom - *Brettanomyces* cultures

p.63 top - The laboratory
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p.64 top - - The monastery grounds
p.64 bottom - The monastery grounds

p.65 top - A glass of Orval *patersbier*















