

# **CRAFT BEER** JEROEN BERT **BREWING**

**THE NEW WAVE  
OF BELGIAN BREWERS**

# PROLOGUE

It was nearly freezing and the grass was covered with snow. Unpleasant circumstances to spend a whole day outside sitting still. But my two brewing buddies and I had a propane stove and a steaming kettle to warm ourselves. And the cold was perfect for brewing. Very few microorganisms — always ready to infect the wort and sour the beer — would hover through the air. A good day for our third attempt to brew an imperial stout.

Not that there was anything imperial about us that day, unless you have Napoleon's 1812 failed Russian campaign in mind. No, the three of us were just huge fans of stouts and we'd been told that high alcohol beers were easier to brew for newbie homebrewers. Hence, an imperial stout. We didn't know how to measure the amount of alcohol back then, but we had certainly been able to tell that our first attempt wasn't high in alcohol. It was light, flat and rather tasteless.

We kept our spirits high, keeping in mind that every brewer needs several brews to finalise a new recipe. However, ours wasn't a new recipe. We had found it on a homebrewers' forum — tested and tasted. And given the fact that our second attempt had turned out to be both higher in alcohol and a completely different kind of beer than the first batch, only one conclusion was possible: our problem wasn't a matter of fine-tuning a recipe. We were messing around in the garden, messing up the basics of brewing. And my terrace floor for that matter.

The brewday had started off well, until we noticed the smell of burning wood: the hot propane stove was scorching the terrace floor planks. Unlike the previous brew sessions, we had put the propane stove directly on the floor. Definitely not a good idea. Our wives and kids, though, had a wonderful day.

While trying to prevent things from getting worse, we had to turn off the stove and wait until we could touch it. It was enough to stop the brewing mid-process and screw up the beer. I have never been able to put my finger on the precise moment where things had gone wrong — the same lack of knowledge that keeps you from brewing well also keeps you from deducing where things go wrong. But when we first tasted the result of our third brew we knew right away it wasn't the imperial stout we had had in mind.

The result was technically beer and probably very representative of what beer would have looked and tasted like throughout history. Although I'm quite sure Napoleon's soldiers would have liked it somewhere in a snow-covered tent on the outskirts of Moscow, I quickly found out you don't make your friends happy and excited with a historically accurate beer.

Looking at the scorch stain on the terrace floor and with fingers nearly numb from the cold, I realised it was time to move inside, buy better and more accurate brewing equipment and, most of all, to learn more about the craft. I needed to get some advice from people who were not only brewers, but who had started as homebrewers themselves and had been more or less where I was now: at the very beginning of an interesting journey.



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# How to brew in a bag



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**T**he first time I visited a brewery, many years ago, the brewer compared the brewing process, mashing in particular, to making a cup of tea. Brewing in a bag is exactly that: it is making grain tea. And all you need is a kettle, a brewbag and some sort of container to let your 'tea' ferment. There

are other things that might be helpful, but basically this is all you need.

Because it's a very easy and cheap brewing method, with less clean-up and ideal for brewing smaller batches, you can brew in your kitchen without having to reorganise

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the place. That's why you will probably brew more frequently and become a better, more experienced homebrewer, trying your hand at a larger variety of beers. At least that's what I did, with the recipes in this book as a result.

Another reason why I chose to dig into brewing in a bag is because it's an easy small-batch all-grain brewing method, which allowed me, in contrast with extract brewing, to go through the whole process from start to finish. It made me feel like the outcome was really *my* beer.

There is a downside too, though. Unlike the nearly closed system most professional craft brewers use, you won't be able to control every aspect of brewing. Your beer will be in contact with oxygen, which may cause oxidation, so all you can do is try to minimise that. With a lot of hot malts in hot water in a tight space like your brewkettle, mash temperature is hard to measure exactly and will not always obey your will. But by starting at the right strike temperature you will be able to prevent temperature problems. And at the end of a brewday you might end up at some point with one litre short or more gravity than you had wished for (because more water has evaporated or has been absorbed by the grist than theoretically predicted). Well, there are ways to adjust this (some as simple as adding some more water to the wort). But you shouldn't care too much if that happens. To enjoy a glass of your homebrew you need to brew it in the first place. And should anything go wrong and your beer isn't perfect, it doesn't necessarily mean your beer is too bad to drink. If you follow the basic rules, you won't screw

up your beer (though there may be room for improvement).

However, this could be different once you start experimenting with wild yeast and kettle souring. You will be, well, experimenting. With mixed results. But hey, isn't that the whole point of homebrewing? When you don't give up after a failed experiment and you try to do it better next time, you do what craft brewers do: you are perfecting your brewing skills, you're pushing the boundaries and you are trying to leave your mark on a popular beer style.

And for what it's worth, the recipes in this book have been tested and approved (not unanimously, tastes differ), but that doesn't mean another homebrewer or I can't make them better. A different hop or yeast, another malt added to the malt bill, aiming for a higher original gravity, more body or a lighter body... These recipes could be a starting point to develop new recipes. They will for me.

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## FROM MASH TO BOIL

- Pull out the bag, let it **drain**. Don't squeeze it. The grainbed contains a lot of tannins that may give unwanted flavours to your beer.
- You should be able to **start the boil with 15 litres** of wort. If more wort is needed, put the bag in a second kettle and sparge with water at 80°C (sparging is not necessary when you brew in a bag, but may be helpful if you want more wort to start the boil). Add the extra wort to the main kettle until you have 15 litres.
- Measure the wort's **pre-boil original gravity**. The desired pre-boil gravity is mentioned in every recipe. Specific gravity is calibrated at 20°C, but your wort will be a lot warmer. An online calculator will help to recalculate the correct gravity (see Useful websites).

## BOIL

**70'** — Start to boil the wort. Adjust pH to 5.2 to enhance protein flocculation.

**60'** — Boil for 60 minutes. Add **bittering hop**.

**10'** — Add 3 grams of **Irish moss** (the same amount in every recipe). This seaweed makes proteins, which make your beer cloudy, clump together and drop to the bottom, so you can easily separate them from the wort you transfer to the fermenter.

**15'–00'** — Add **hops for flavour and aroma**. The longer your hops boil the more the alpha acids in the hops will influence the bitterness. The shorter the hops boil the more the other components, like humulene and myrcene, will have an influence on flavour and (eventually) aroma. This of course also depends on the hop variety used.

**00'** — Stop the boil.

## FERMENTATION

- **Cool down the wort** to 25°C. You can use a wort chiller (add it to the boil 5 minutes before the end to sterilise it) or put the kettle in a sink filled with ice water.
- Measure the **original gravity** of the wort: you're measuring the amount of solids, mostly sugar, in the water. If you end up a bit higher than the recipe says, you can add cool mineral water from an unopened bottle.
- Syphon to the fermentation bucket using a PVC tube.
- With this method and these recipes about 11 litres should go into the fermentation bucket (you've lost about 6 litres while mashing and boiling, and added some water along the way).
- **Sprinkle the dry yeast over the wort**. You can make a yeast starter, but for homebrewing most yeasts do just fine when pitched in their dry form.
- Let it ferment for a week at the desired temperature (until there is no fermentation activity noticeable any more).
- **Measure final gravity**. The difference between the original gravity (OG) and the



*On top of a 30-litre fermentation bucket I also use a 5-litre demijohn to experiment.*

**'WE WANT  
TO CREATE  
BEERS  
THAT ARE  
DIFFERENT  
FROM WHAT  
WE'VE  
BREWED  
BEFORE'**



# DOK BREWING COMPANY

## *Don't Mention the War — juicy pale ale*

Spacious, raw, in your face. The post-industrial looks of a polished concrete floor, red-brick walls, heavy steel beams and a high, glass-panelled saw-tooth roof. It contrasts with the crystal chandeliers suspended from that roof. They bring a hyperbolic touch of the atmosphere you would associate with the townhouses in the historical city centre. Then there are the slightly weathered wooden tables and chairs, which seem to enjoy a second life here after years of (I imagine) being crammed inside an old, barely lit pub. Lined up next to each other — in order not to feel too lost in their new, vast environment? — they invite customers to connect while enjoying a meal or a beer.

We're in Hal 16, in the Northern Docks site in Ghent. It's the playground of Dok Brewing Company, one of Ghent's newest microbreweries. The centrepiece here is a long bar with 30 taps. Above it, supported by the heavy steel beams, is a mezzanine hosting two large barrels. Behind the bar are stainless steel kettles and tanks, connected by an intricate construction of pipes.

This hall echoes the old economy, its inhabitants embody the new. It used to be filled with the transformers of the Belgian engine factory ACEC, a dinosaur of the 19th- and 20th-century industrial age. Today it is a meeting place for foodies, beer geeks and anyone who enjoys good, honest food or likes to have a beer in the sun on the large terrace outside.

The food hall with its brewpub and brewery is a fine example of how a run-down industrial building can be converted into a buzzing meeting place. It mirrors Ghent's enthusiasm for culture and taste, and the city's openness to local and artisanal entrepreneurship. The people I am about to meet here are excellent ambassadors of that spirit.





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# 48 HOURS

Whenever I visit a brewery I try to make myself useful, which in reality means I get to shovel the spent grains out of the mash tun and practise the art of wiping the floor. Now that sparging and pumping is done I get to play my part. I fill large baskets with the spent grains and then Franklin and I pull the heavy baskets outside, ready to be picked up by the people of *Kopje Zwam* (which translates as ‘a cup of mushrooms’), a cooperative of mushroom farmers in Bruges. They utilise used coffee grounds as a substrate layer to grow mushrooms, and now they’re testing whether spent grains can be used too.

The hot grains smell great, and together with the pleasant cold – today’s a chilly but beautiful, sunny February day – it stimulates my growing appetite. Unlike Franklin I had breakfast very early and with lunchtime steadily drawing near I’m getting hungry. ‘Normally, when we have guests, we have lunch in the restaurant, but it’s closed. They’re having their annual three-week holiday,’ Franklin explains. I’ll have to grab some lunch in the centre of Damme instead.

Siphon Brewing is situated on the premises of the Siphon restaurant, a four-generation family business, well known in and outside of this corner of Belgium, in between the North Sea and the Dutch border. ‘Breandán got to know the family of the Siphon through a mutual contact, and they were interested in starting a brewery beside the restaurant. One thing led to another and now here we are.





*Artisanal brewing can be tough. Removing the spent grains from the lauter tun is mainly done manually. Dragging the big bucket with spent grains outside is manual labour all the way.*



‘Working like this, in association with the restaurant, certainly gave us a head start. But still, running a brewery isn’t an easy thing.’ In a small brewery like Siphon Brewing doing things together and enjoying your passion is important, but doing things in an efficient way is crucial. And to get the business started Franklin had to combine two jobs. ‘We used to do these marathon brew sessions from Monday morning to Tuesday night, because from Wednesday to Friday I still worked as an electrotechnical engineer.’ It meant that different batches of the different beers had to be brewed within 48 hours.

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Today’s two consecutive batches of Blinker are like a walk in the park for Franklin. But he emphasises he’s happy that the marathon brewdays are over. Franklin is a full-time brewer now. ‘You can’t keep on doing these marathon sessions. I’m glad I can spend all my working time on brewing now and more or less have a normal workweek.’

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# ROCKSTAR HALL OF FAME

Entering a foeder and barrel hall is a thrilling experience, especially for a beer geek — and regardless of the cardboard box in my hands. One is hardly ever welcomed by a musty smell, but that's not the case when you enter a hall full of wooden barrels and foeders. It's a counterintuitive sign of good health. They need a humid environment in order to keep them from leaking. I feel like I'm in a giant cellar. Looking at four foeders containing 4000 litres each only adds to this impression. They are lying one next to the other, brotherly, in unison. To the eye it's as if they're playing a simple but harmonious chord. At night, would they lead the choir of 74 other, smaller barrels? Singing something like 'Hey! Ho! Let's go!' to urge the Lactobacilli in their microbiological pogo?

If the brewing hall is the meticulously monitored and steadily beating heart of a brewery, then the foeder and barrel room is much like the extremities of our body, which respond — sometimes in odd ways — to external stimuli. Cold winter hands that start to glow in warm water, an electric shock when you hit your elbow, the blood that flows through the vessel between your legs when aroused... Quite exciting, precisely because it's hard to keep it fully under control.

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*Hey! Ho! Let's go! — all the barrels at 't Verzet are named after famous artists so they can be identified more easily.*

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# WORK-LIFE BALANCE

Alex would like to be home rather early today. He's got a date with his wife. 'Since we had children we go out on a date every month.' Alex and Koen share their private planners online, so they know when the other has planned something special and can't work late hours. Being passionate is essential for a craft brewer, but Alex and Koen also want to maintain a good work-life balance. A good balance — it's exactly what they want in their Oud Bruin as well.

It's time for me to go home too. It's my wife who's got a date. She's meeting up with some friends. When I get home it will be time to read a bedtime story and then tuck in the children. My companion for the night, while I type out the notes of the day, will be Kameradski Balsamico. And the date with my wife will be marked in our planner with vibrant colours. Time for some compensation for all the hours and days I set aside to write this book.

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# CAUTIOUS RELIEF

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‘Are you relieved now?’ I ask Elise and Stendert, who are doing some paperwork for the brewery while Peter and Igor are monitoring the mashing process with Erik (Jens showed up briefly, but is in the middle of a varnishing job at home). ‘We’re happy that the first brew session is ongoing, but we’re also careful not to be too excited. We’ll be relieved when today has passed successfully and the excise duty formalities are over,’ Elise says. ‘So far we haven’t missed any important deadlines, but now two are getting closer. We want to have new beer for Billie’s Craft Beer Fest in November, and around the same time a beer should be ready that we’ve developed for the fifth anniversary of a nearby beer pub. So we would like things to move on now.’

‘Peter takes care of the excise duty formalities and he has been told that it should only take a couple of weeks from now,’ Stendert adds. Given that he is the man of numbers and figures in Cabardouche (all members brew together, but they have their own responsibilities within the company structure) I ask him whether it was hard to bridge this period of unexpected brewery inactivity. ‘Well, we’re lucky that our core beers were still brewed at Anders. We had some expenses, like rent, that were not compensated by an income from production here, but we luckily weren’t entirely dependent on it,’ Stendert explains.





Despite the setbacks the Cabardouche brewers are full of plans. They still stick to the ambition of being a real city brewery like in the old days. They want to work out the idea of beer subscriptions. And they most of all want their brewery to be a fine meeting place for people with good beer ideas who want to come and join the brewers on a brewday?

Sustainability is vital to their future plans too. Cabardouche is participating in projects developing reground beer crates and recycled kegs and has plans to bring the spent grains to a local children's farm and a mushroom farmer. And they want to grow their own hops in the future.

But above all they want to brew accessible beers and specialty beers for a reasonable price, so that many people will be able to taste them.

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*craft breweries you need to know*



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The rising number of Belgian craft beers and craft breweries is part of a global story. Belgian beers are liked and respected all over the world, but the craft beer revolution we see at work worldwide was born in the US. In the course of the last three decades the rest of the world has followed, and so has Belgium.

On this page and the next you will find two lists with craft breweries you should discover: 33 Belgian breweries (on top of the eight I joined for a brewday) and 33 international breweries. For Belgian beer lovers some of the names in the first list will sound familiar, Dutch beer lovers will certainly recognize some Dutch breweries in the second list, etc. With these lists, however, my first intention was to bring a few rather unknown and (relatively) young breweries to a larger audience.

To limit the arbitrary character of such a list — inevitable if you want to select 2 x 33 breweries to discover — I've used the same criteria I used to select the brewers I visited: a transparent way of brewing, focus on the product, authenticity, an open mind and the drive to innovate and collaborate. And above all: all the breweries in the two lists can be linked to one another in one way or another and they form an informal, organic and diverse network. Because they did a collab together, shared a boot at a beer festival, discovered each other in the course of a beer odyssey, or because they follow each other's work closely and I was tipped off by a fellow brewer.

If you use these names and websites to search the internet, you'll get a good idea of what moves in the craft beer world, but of course the lists are no more than a sampler and incomplete. For this book I limited myself to bite-size lists, an easy-drinking 33cl can if you like. Suggestions of breweries I should discover — and I'm sure there are many — can be made on [www.beerodysseyinrubberboots.com](http://www.beerodysseyinrubberboots.com).

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# 33X BELGIUM

1. **ALVINNE**  
MOEN  
[WWW.ALVINNE.COM](http://WWW.ALVINNE.COM)
  2. **BASTARD BREWERS**  
MONS  
[BASTARDBREWERS.BEER](http://BASTARDBREWERS.BEER)
  3. **BOKKE**  
HASSELT  
[WWW.BOKKE.BE](http://WWW.BOKKE.BE)
  4. **BRASSERIE  
À VAPEUR**  
PIPAIX  
[WWW.VAPEUR.COM](http://WWW.VAPEUR.COM)
  5. **BRASSERIE DE LA  
SAMBRE**  
SPY  
[BRASSERIEDELASAMBRE.COM](http://BRASSERIEDELASAMBRE.COM)
  6. **BRASSERIE  
DE LA SENNE**  
SINT-JANS-MOLENBEEK  
[WWW.BRASSERIEDELASENNE.BE](http://WWW.BRASSERIEDELASENNE.BE)
  7. **BRASSERIE  
DU BRABANT**  
BAISY-THY
-

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8. **BRASSERIE MINNE**  
BAILLONVILLE  
[BRASSERIEMINNE.BE](http://BRASSERIEMINNE.BE)
  9. **BRASSERIE  
SAINTE-HÉLÈNE**  
FLORENVILLE  
[SAINTE-HELENE.BE](http://SAINTE-HELENE.BE)
  10. **BROUWBAR**  
GHENT
  11. **BROUWERIJ BROERS**  
WACHTEBEKE  
[WWW.BROUWERIJBROERS.BE](http://WWW.BROUWERIJBROERS.BE)
  12. **BROUWERIJ  
D'OUDE MAALDERIJ**  
IZEGEM  
[WWW.DOUDEMAALDERIJ.COM](http://WWW.DOUDEMAALDERIJ.COM)
  13. **BROUWERIJ MAENHOUT**  
PITTEM  
[WWW.BROUWERIJMAENHOUT.BE](http://WWW.BROUWERIJMAENHOUT.BE)
  14. **BROUWERIJ RUIMTEGIST**  
KORTRIJK  
[RUIMTEGIST.BE](http://RUIMTEGIST.BE)
  15. **BRUSSELS  
BEER PROJECT**  
BRUSSELS  
[WWW.BEERPROJECT.BE](http://WWW.BEERPROJECT.BE)
  16. **DE DOCHTER  
VAN DE KORENAAR**  
BAARLE-HERTOG  
[WWW.DEDOCHTERVANDEKORENAAR.BE](http://WWW.DEDOCHTERVANDEKORENAAR.BE)
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# ACKNOWLEDGMENTS

Writing a book is an intensive enterprise that travels many, often winding roads. Ideas come, and go. And they come from all directions, not just from the inspiration of the author. He is the one who is met with applause — let's hope there will be applause — but the hard work to make this book possible has been done by many hands.

I would like to thank Nele Pierlet for the lovely pictures and for accompanying me on this beer odyssey, director-publisher Johan Ghysels for believing in this project, and editor Thomas Van der Goten for coordinating it, and for the interesting talks and the necessary feedback that helped to turn an idea into a finished book. I would also like to thank graphic designer Tom Suykens and the copy editors Tamsin Shelton and Jan Vangansbeke for their contribution to image and word, and brewer Janos De Baets and beer connoisseur Daniella Provost for checking facts, figures, background information and beer recipes.

Writing a book also requires making choices and comes with ups and downs and alternating moments of enthusiasm, despair, relief, sighing and cursing, hyperactivity, decompression and — let's not forget — a lot of pleasure. But more than the author it is the loved ones, with a front-row seat, who sometimes get to suffer, being the first to buffer when the tension rises. That's why, above all, I would like to thank my two sons Korneel and Pepijn and my wife Carmen Vandeputte for their support, their patience and the many fresh, unbiased ideas they came up with. Exactly what a father and husband needs when his thoughts are wandering to some remote place, where text, brewkettles, beer and rubber boots rule. They helped me to focus again on what really matters.



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