

THE MAGAZINE FOR THE HOMEBREWER AND BEER LOVER

ZYMURGY

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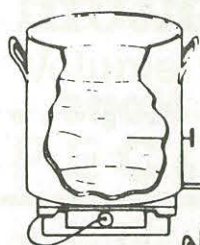
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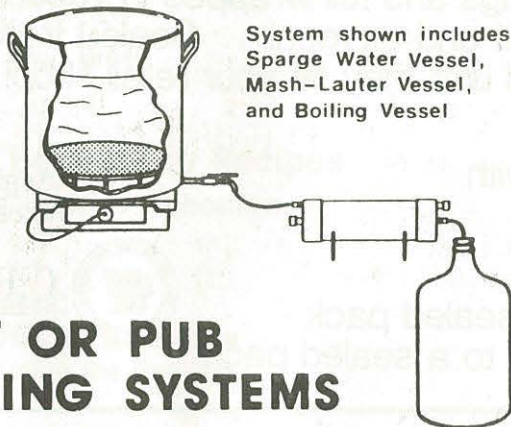
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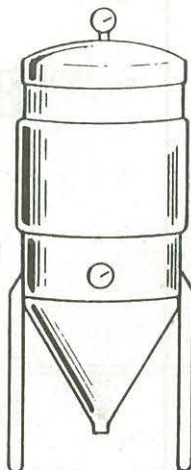
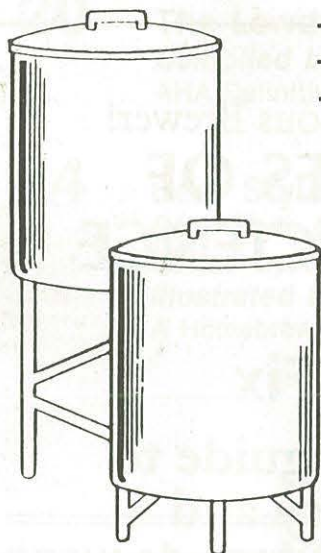


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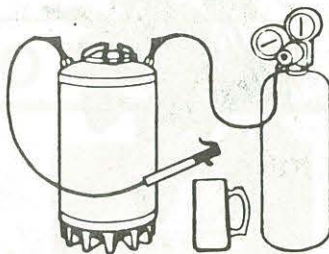
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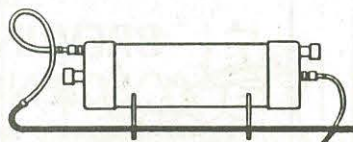
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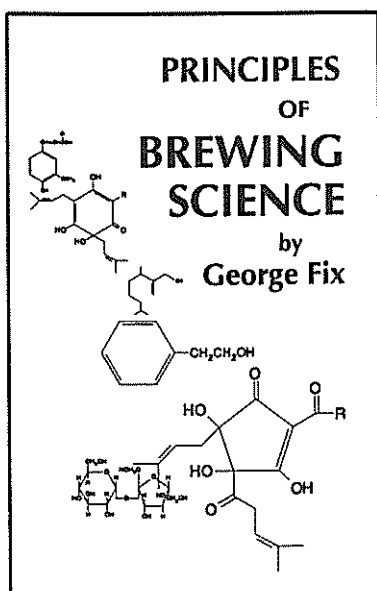
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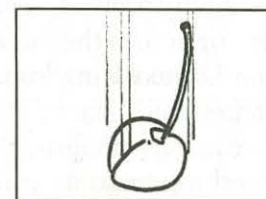
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EDITORIAL

CHARLIE PAPAZIAN

The Great Stuff The Easy Way

So many good beers are available now I don't brew as often." Right? Wrong! A thousand times wrong.

I'll be the first one to be pleasantly surprised by a quality-brewed commercial beer when visiting non-brewing acquaintances. And I take great delight when a bar can offer me choices I truly enjoy. But what really turns me on is coming home thirsty and having a few of my own homemade beers that I prefer over anything available commercially.

For me, there is no comparison to the beer I brew. The only commercially brewed beers I enjoy as much as my own are at the brewery or across the bar at brewpubs in the United States, Canada and the United Kingdom. I didn't always feel this way.

Sometimes I learned the hard way. Sometimes I learned the easy way. I've always preferred the easy way. That's when there's someone or something to guide you to that perfect beer. The art and science of homebrewing have reached a point where it's possible for everyone to make the kind of beer preferred over any other, the easy way.

I'm dead serious when I tell you that I often treat myself to one of my preferred homebrews, completely satisfied, and muse, "This beer was so easy to make. There must be some way to tell others about my satisfaction with home-made beer in a way that will make brewing great stuff as easy for others as it is for me."

This special issue of **zymurgy** is all about brewing great stuff the easiest way we know how. We've asked award-winning homebrewers to share with us some of their favorite recipes. A few recipes are included simply because I've tasted the beer and thought it was so good you should know about it. The American Homebrewers Association thanks all the authors and brewers who have contributed their time and efforts to make this an inspiring special issue of **zymurgy**.

The great stuff the easy way—with a combination of malt extracts, specialty grains and a good foundation in brewing techniques. We hope to inspire you to think as highly of your beer as you do of your favorite commercial brands.

—Charlie Papazian

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DESIGNING YOUR OWN BREW

What Makes Your Beer Special

It is nice to have the advantage of being out of the beer business for some time now, and having the freedom to talk without having to make a living from it. This is not a startling idea, but one that is new to beer: It helps to know where we have been to understand where we are and where we are going. So I'm looking at a cultural-historical approach to homebrewing.

Specifically, I'm looking at some of the great beer traditions as ethics that are still able to instruct us today. My theme is 'Malem savicium fasium bonatur in catasium sterceres.' It's a law from the city of Danzig in about the 13th century that means, loosely translated, "Whosoever makes bad beer shall be thrown in the dung heap." And in some sense that's the flip side of the Reinheitsgebot. It's what they never told you about the people who broke the law. I think it's an appropriate theme to begin a discussion like this.

Beer flavor is something that's socially important. The decision to make beer in a particular way is ultimately a social decision. I suppose the equivalent of that law today would be a lot more market driven and be something like, "Whosoever makes bad beer shall be forced to give up market share," or "Whosoever makes bad beer shall be forced

A former divinity student, Alan Tobey has been a book editor, technical writer, sociology researcher and publishing researcher. He formerly was manager for home winemaking and brewing at Wine and The People in Berkeley, Calif., and now is a lecturer on brewing and winemaking at the University of California, Davis, a computer consultant and software author.

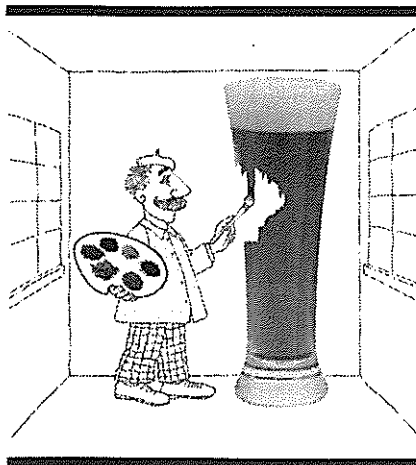


ILLUSTRATION BY SHELLEY FRESHMAN

to double his advertising budget." That's also the kind of social decision that influences the way we have been. I think in many ways it thresholds another great brewing tradition.

Two Traditions

Perhaps we are on the threshold of two traditions. The first may be ushered in by technological change, through bioengineering and genetic manipulation of yeast. If that's true, I think it also will usher in a second tradition—a change in beer flavor that will be socially driven. It may well be possible to genetically engineer yeast that doesn't need malted barley as a substrate.

If that's true, I'm sure it would save the large brewers a great deal of money, and I'm also sure it would influence the flavor of the beer that's produced because there's something that ultimately derives from the malting process in beer flavor. So in some sense, we're on the threshold of one beer tradition that may be technologically driven and on the threshold of another beer tradition that's driven more from the sense of style and flavor. That's the one that I want to discuss here.

After doing some research into history, what struck me is that the great beer traditions are generally introduced by very specific changes. Those changes may be technological, as in the introduction of refrigeration, or they may be by accident, such as lambic in Belgium that developed over time from accidental fermentation. They may also be driven by social changes. I will discuss some of the principles that cultural considerations make you think about in designing a beer with a particular flavor.

Let's have a look at the traditions of two eras: one in the 16th century and one in the 20th century. The first tradition is what I call the "war between ale and beer." The introduction of hops into England can be traced to A.D. 1520, plus or minus two years. That was the time of Henry VIII during a lot of social change in England when the Reformation was starting and the English church was changing. A famous two-line poem that dates from the same period that goes like this:

'Hops and turkey, carp and
beer
Came into England all in one
year.'

Revolutionary Change

Because there was a revolutionary change in English drinking habits, I call it the "war between ale and beer." My theory is that brewing is an event, not just a process, and it has social consequences. By making a beer, you're making a social statement. The other view is much more recent, and it begins to change in the early 20th century. It has consequences that come down to us today that have to do with the social use of beer in our time.

Beer Is Food

Here I'll take as my keynote quote a passage from *One Hundred*

Years of Brewing, published in 1903 as a summary of history and review of the state-of-the-art about the turn of the century.

"Beer above all must not alone be regarded as a luxury but also as a food product. Millions of the working classes find in beer a cheap, healthful stimulant while engaged in hard physical labor which besides its nourishing effect, possesses other still more invigorating strength-replacing qualities. It is owing to its great percentage of extract together with a moderate amount of alcohol that beer possesses the qualities necessary to serve these purposes."

I think many years later this does not very accurately characterize most American beers if we describe them as having a "great percentage" of extract."

Certainly times have changed, and the keynote quote for this decade is a lot shorter. It's one sentence. "Everything we ever wanted in a beer and less." I would like to think that's not just a marketing-related change. In other words, it's not just a bunch of brewers in their board room deciding the only way to get people to drink more beer is by making it thinner. I think it's rooted in a kind of change in American culture away

from hard physical labor as a social norm and toward a white-collar or information-age kind of beverage.

These days, I spend most of my day working at a computer terminal. I don't need a beer with a great deal of extract to work as a "cheap, healthful stimulant while engaged in hard physical labor." My needs in terms of beer are mental stimulation and refreshment, rather than support of great physical labor. So I think we've gone through a social change that's reflected, at least in part, in the change toward light beer. That's in part a technical change—the influence of technology in American brewing that makes lighter beer possible.

But I think the point to note is that the change in flavor is not just an arbitrary one. It's rooted in the decision about a style of beer that in some sense is perceived to be consonant with a change in society. I think that's the kind of doorway microbrewers, both amateur and professional, are about to pass through. In fact, we're at the threshold of another era.

Style has a couple of definitions. It is a characteristic manner of expression of distinction, excellence, originality and character. You might use "class" as an analogy. It's not

just a particular brand of beer, not just a particular connection of flavor, but a characteristic manner of expression. Design, in that sense, is the arrangement of components (ingredients) to produce a complete and artistic unit, put together to produce something characteristic and distinctive that's derived from control of the components and the process.

What that means is that a good beer is either an accident, something you stumble on and may never reproduce, or something that may develop by accident into a reproducibly good beer. Or else it's a designed beverage with style. I think that we're at the point where we need to talk about beer as a designed beverage with style. When judging porters at an AHA competition I noticed that the entries went all the way from pale ale to extra stout. A couple tasted like fairly decent dark lagers. I think we're at the point of a thousand flavors, where the styles are up for grabs, and even the most committed brewers don't have a sense of what style means.

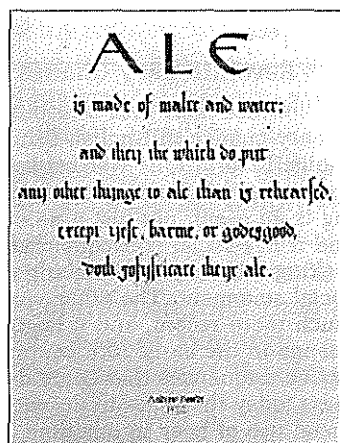
Style Is Tradition

Style ultimately comes not from a recipe but from a tradition. In that sense, novelty is not style in that we as microbrewers, both amateur and professional, have been slaves to recipes. We should be slaves to tradition. What has style is the local beer, because if you're doing something that's not grounded in where you are, in the society where you live, you're doing something very wrong. That's why I think that arbitrary categories used in competitions are probably misleading in the sense of what the next tradition of beer style and flavor will be.

What I mean by local beer is something that depends for its style on a number of factors. First of all, on climate. If I had a Colorado brewery, I'd probably be brewing something like Coors. I wouldn't be brewing something like McEwan's Scottish Ale, certainly not all year round. Coors fits the style there; McEwans probably would not.

It's widely rumored that when Coors was developing the recipe for

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George Killian's, they brewed it exactly to George Killian's original recipe and found that, for reasons I think were not market driven, the result was rather a heavy beer to produce and sell in Colorado, a state with lots of hot summer beer-drinking time. In fact, the beer that developed was a beer that fit better in that climate; a beer sort of inspired by George and adapted to the climate of the marketing area of the Coors brewery. I don't think that's bad, marketing questions aside. Maybe the advertising is a bit misleading, but the beer is probably better in terms of market intentions than what we have here.

In addition to climate a beer depends on agriculture. If we're in one of the great breadbaskets of the world, there's probably no point in importing German lager malt. We can grow good, true American malt and barley with different flavors but certainly with a good base for the kind of beer we find here.

Fortunately, we're in a time when world trade is quite easy, for local beer also depends on politics, by which I mean world trade. Those of us who brew with Saaz hops from a country with a very different political system or with hops from other parts of Europe or even China know that we are dependent for beer flavors on politics as well as on agriculture and climate.

Beer Is History

Local beer also depends on history. As an alternate beverage it has to compete with soda pop, gin and everything else that's out there for the thirst of the consuming public. It also certainly depends on science. Brewing science means that which you can control. There's an increasing number of factors that can be controlled, perhaps right down to the genes of the yeast. The local beer is the beer that takes into account what can be controlled. I think the local beer depends on accidents, or randomness. Someone happened to produce a beer in a particular way in a particular place that developed a tradition.

Anchor Steam is a very good example of a beer that doesn't fit some of the other criteria you might choose if you were designing a beer

from scratch. It evolved from a historical accident—refrigeration was too expensive in San Francisco during the last half of the 19th century. Out of that accident, science, politics and agriculture came together to produce a particular style of beer that, at the time it was brewed, was probably the best beer that could be brewed. In San Francisco there's a wider choice now, but from that accident has developed a style that has influenced other beers.

Another way to look at style is personal: what are the flavors you want? It encompasses the extremes. The approaches may be old butt-kicker versus beer that fits your life. Most of us, and certainly myself included, started brewing beer because it was a cheap form of alcohol. When it was cheaper to produce homebrew than it was to buy cheap commercial beer, the image was old butt-kicker, but that gets kind of tiring after a while. After a few years, you want beer that fits your life. In that sense, beer either fits thirst or nutrition. Once you think about nutrition, you have to think about beer in a less abstract sense, and more in a particular sense—beer that fits the season, the weather and your diet.

To decide to brew a beer that isn't just old butt-kicker, the maximum high for the minimum bucks, you also have to be aware of what you're doing with the rest of your life. I would like to take that one extreme further.

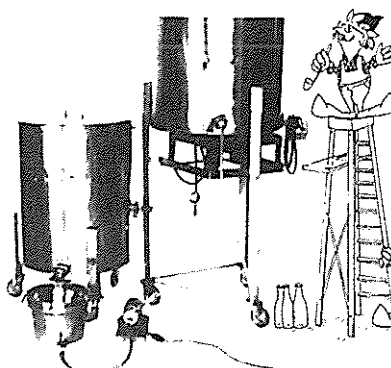
Getting the beer flavor you want means knowing who you are. Good brewing is not brewing for your ego. I'm sure there's more than one microbrewery around because the person who began it decided to brew the beer that he or she liked. It was brewed from the recipe that always got a bronze medal in the Sonoma County Harvest Fair and all his or her friends thought it was the best thing they'd ever tasted. Yet brewing beer for commercial purposes is very different from brewing for yourself. Brewing for commercial purposes certainly should be something different from brewing beer for your ego.

Style Fits In

The question of style is not a question of what you like. It's the question of what fits in. You can turn that around and say that developing your brewing art and your beer design skills are a way of knowing who you are. In other

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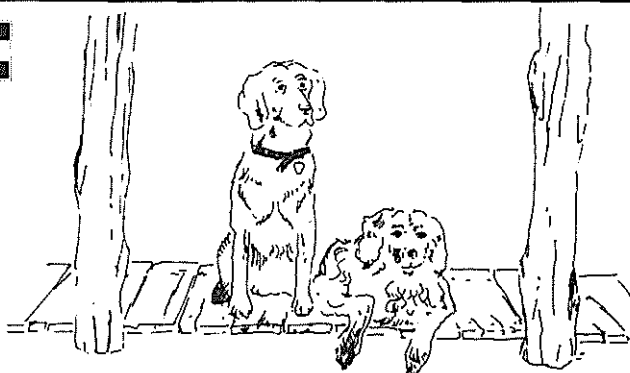
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words, to produce good beer you have to have your act together. Unless you really know who you are, where you fit in and what your lifestyle is, your sense of making consistent beer with good style and good design is really limited and you're back into the realm of accident.

What really needs to be taken into account when designing and producing a beer with style? Here I want to talk about brewing as cuisine. Cuisine is maybe another one of those words that has a bad reputation because of trendiness. We see trends for the "California cuisine" that, taken to extreme, was three slices of raw duck breast and five slices of raw kiwi fruit. This is the pursuit of trendiness for its own sake. I think behind that sense of cuisine, trendiness is a sense of cuisine of authenticity. Cuisine, both beer and food, is a primary process that depends for success on minimally processed ingredients.

The converse of that is what I call the "Velveeta" effect. If you have a food product that's as highly processed as it can be, what you can do with that is rather limited. I'm not trying to say that Velveeta is inedible any more than I would say that a beer kit makes undrinkable beer. But the more you go down the line toward preprocessed and predetermined products, the less freedom you have to create a beer with style.

So I would say that the beer style is produced from ingredients with as minimal processing as possible. Obviously, you can't make beer from raw barley right off the plant. You can rip hops off the vine, rush them to your brew kettle and produce a beer, but you produce a beer with a different flavor. You come to the point where the first step in the processing is accepted as the minimum that's necessary. It's that point where the creativity is grounded in the basic raw materials. Another way to say that is that minimal modification means maximal expression. The more you give up your flavor decision to someone else, the less you can design a beer with your own sense of style. The more you let some malt-extract maker or some hop-extract producer or some beer-kit producer take away your freedom to decide, the less your beer will fit your situation except by accident.



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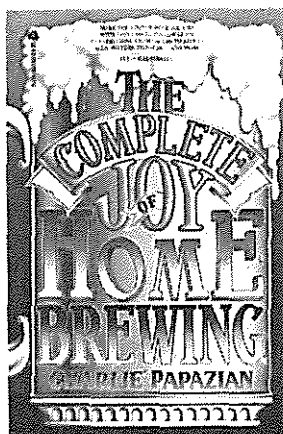
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Brewing As Cuisine

Brewing as cuisine depends on access to raw materials. For amateur and professional microbrewers the access to raw materials is extremely important to the kind of creativity they can have.

The most important single factor in getting the flavors you want is in not getting the flavors you don't want. And here the only real secret is sanitation. The only really important principle in brewing is sanitation. If you can avoid the flavors you don't want, you're two-thirds of the way toward beer with a sense of individual style.

Here the secrets are only four, and you've heard them all before: heat, chlorine, stainless and care. The more you can put a beer in something that's real hot, the more you can put your beer in something that's had chlorine or iodoform or something that's an actual sterilizing agent, as opposed to things like sulfur dioxide that are basically placebos. The more you can put your beer in touch with stainless instead of glass or plastic, and the more you can make sure that everything that touches the beer is sterile, the more you will avoid getting the flavors you don't want.

What are the parameters of beer style? You all know about specific flavor components, color, body, aroma, bitterness, sweetness and roastedness. Those are sort of the ground base of beer with style, the things that you put together from your primary ingredients to produce the basis of what you do. Alcohol is a component of beer style that we don't really talk about too much. At one extreme, it's the old butt-kicker. In the middle is something that's a carrier of flavor rather than a component of flavor. It's certainly something that needs to be considered in terms of its style.

Style Is Expectedness

The next point I'll come back to again is what I call traditionalness, or perhaps even better, expectedness. Beer drinkers, probably all of us, are tradition oriented. They expect beer to taste like what they know beer to taste like, and things that are untraditional or unexpected are not going to be received to the same degree as something that tastes like what they know.

Balance is another important thing that is largely neglected in

homebrews. You can make a dramatic statement by using lots of hops, lots of roasted malt, lots of alcohol and lots of sweet malt, but unless the question of balance is addressed, then you're not quite there.

And finally, I have to put in enjoyment of the process because it is an event and not just an outcome. Unless you factor in enjoyment of the process into your beer style, then you'll also be producing beers that don't fit your life and beers that occur by accident.

EIGHT PRINCIPLES OF BEER DESIGN

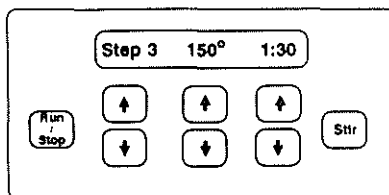
I have eight principles for designing beer; some may be very familiar and some may not be. Principle No. 1 is what I call the pure neutral base. By that I mean that all beers should be based on minimally-processed light ingredients, even if you're brewing stout, and again this is made from 90 percent pale pure ingredients and 10 percent roasted barley, more or less. No matter what you're brewing, you're brewing

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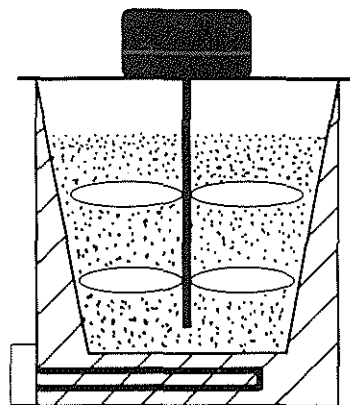
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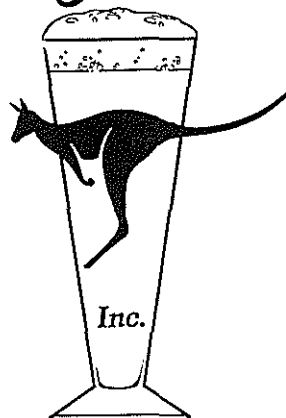
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basically a pale beer with some other things thrown in.

The important ground to every beer with consistency and style is making sure that pure light ingredients are what you want and are as controllable as you want. For that reason I don't like dark malt extract. I'll admit to being prejudiced because in using dark malt extract you're using something that has been taken a step farther from the pure light ingredient. When I brew and when I advise people what to brew, every beer in my opinion should be based on the palest, lightest, purest-flavored ingredients possible because that is what carries the beer no matter what else you add. I think most homebrewers tend to minimize the extent to which they let other people do their work. Therefore, your light ingredient should be chosen with the greatest care.

No Fig Leaves

The corollary of that is Principle No. 2, what I call ABC, which in this context means "always brew Coors." What I mean by that is that Coors is in some sense one of the most technically-advanced beers in the world because there's so little to hide behind. If you have Coors with a defect, you know it. If you have Coors that's a little bit stale, you know it. There's nothing to hide behind. I was going to call this "always brew nude" in the sense that we would like to produce a beer you can't hide behind. It's beer without fig leaves. And it's a sense that whenever you're brewing, the delicacy is what you have to preserve and you do that by some principles we'll talk about later. But with that in mind, you can't hide behind 10 percent roasted malt, you can't hide behind an ounce of hops per gallon because all you get are defects underneath dramatic statements, and that's not a beer with style.

Principle No. 3 is if you make your statement with distinctive spices and condiments, we really are talking about pinches of this and pinches of that. You're taking five gallons of beer that weigh 40 pounds and adding to it an ounce or two of hops, a few ounces of crystal malt, an ounce or two or three or four of black malt. That's where the artistic statement comes on the ground base of the hopefully pure light ingredients. And here's where you really

talk about the quality of the ingredients coming to the fore. If you haven't already taken out your creative possibility by giving up the flavor decision to some processor of your primary ingredients, then what you have is the ability to add pure ingredients with known flavor effects in amounts that you can control very precisely.

The idea is that a small percentage in the beer makes a big effect. And here is the place to use the ingredients that you know best, the grain malts, the fresh hops. Unless you're doing an absolutely pale beer, adding small amounts of the best-quality and best-flavored crystal malt that you have, adding the freshest, purest and most potent hops are the ground of your creativity. It's the configuration that you put on the ground base of the light ingredients.

Then I think another principle (No. 4) that is almost independent is that complexity is better than linearity. Generally, adding two hops is better than adding one, adding four hops may be better than adding two, using two different flavors of crystal malt from two different producers may be better than using one. Adding a tablespoon of chocolate malt to a brown beer along with crystal malt and pale malt may be the way to add a distinctive sense of flavor that you can control, and it's a flavor that again you have not given up to the processors.

Principle No. 5 is that alcohol is not a flavor. I mean that in two senses. Alcohol is in most senses a carrier of flavor and in the other sense alcohol is not a flavor component, but it's a designed component if what we're after is a beer that has an effect on us in more than just a social sense. I don't know how many of you have shared with me the experience of giving to a friend a good hoppy homebrew that may be 3 or 3½ percent alcohol. After having drunk it and sitting around for 10 minutes, the friend's comment is, "Boy, this is a strong beer. I can really feel this."

Effects of Hops

What they're feeling is not so much the alcohol but all the other things that affect your physiology, which in most cases is the hops. Hops lower blood pressure, dilate your arteries, and put you in a state of relaxed euphoria. We have a Dionysus of alcohol, but I think we

should have a Dionysus for the hops. For those of us who look at effects beyond flavor, the effects are not those necessarily of alcohol, but of the total components of the beer that affect your physiology. You can design beers very well to put people to sleep, to relax them and put them into a non-Dionysian euphoria. That is very much a sense of personal style. It's the sense of Dionysian euphoria that old butt-kicker doesn't give you and that even drinking too much alcohol doesn't give you. In some sense it's an alternate high that needs to be played up. The way to design it is not to design beer around alcohol.

Principle No. 6 is calculation. There's really no excuse for not knowing what it is you're brewing. You can calculate ahead of time and know what you expect to get in the way of at least original gravity and final gravity. Anybody who can't afford \$5 for a hydrometer shouldn't be a brewer. Calculating ahead of time is the ground basis style again. Unless you know what to expect and can find out at the beginning and the end of your brewing whether or not what you produce is what you expect, all of your beers will be accidental beers.

The route to calculating, at least original gravity and final gravity, are through two wonderful concepts called degrees of extract and degrees of body. Degrees of extract are how much change in specific gravity is produced by adding or processing one ingredient into one gallon of wort. Degrees of body are how much of that is left over. Contribution to body is measured by specific gravity by one pound of ingredient in one pound of fermented beer.

With just those kinds of calculations, you can begin to produce reproducible and not accidental beers. Body and alcohol are the key. You can take that one step further and talk about ways to calculate balance. Here I can't resist putting in my famous cube-root formula for hop balance. To give you a one-minute version: to calculate hop balance you need to look at things that contribute to the need for bitterness so that talking about degrees of bitterness is an arbitrary unit of bitterness per gallon of beer. The thing that's worked best for me is to look at cube root of the original gravity times final gravity times the difference between the two, taking those numbers as specific gravity



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and stripping off the leading digits. So specific gravity 1.038 would be 38 original gravity and final gravity 1.010 would be final gravity 10 in the formula like this. Take those and multiply them together, take the cube root and divide by a fudge factor, which is basically an indicator of personal taste and style.

Use Bitterness Formulas

Using a formula like that gets you degrees of bitterness per gallon and from that, according to the equation, you're easily able to calculate the ounces of hops you need to produce a specific degree of bitterness in a particular volume of beer. What I'd like to suggest is that something like this is fairly easily calculable and gives you a number you can hang on. So if you're producing a beer in a particular style, you can say that for the degree of style I want to produce, I will probably need to start with this original gravity, to probably produce this final gravity, given that I can produce a balanced beer in my style by calculating in a reproducible way the amount of hops that I want to add to the beer.

Fermentation is another one of those arts that involves minimal interference but maximal watchfulness. It's not fussing with your beer, but it's knowing when to act decisively. It becomes almost an unconscious art. I've been awakened

"You Have To Be Not Only A Brewmaster But A Sociologist And A Psychologist To Produce A Beer That Has Flavor."

in the middle of the night by my lager calling to me, "it's bottling day." It may not get quite that explicit but what you've developed is a sense of timing, knowing when to intervene in the natural process before things go too far. Principle No. 7 is that fermentation is an art of watchfulness and not an art of doing.

The final and 8th principle is a reiteration of when it comes to flavor, there are no rules, only expectations. I don't think I can say this strongly enough. Beer flavor is what is expected and not so much what is created. What people expect beer to taste like is probably the primary ingredient you should consider in designing a beer with a consistent style. What people expect a beer to taste like is a social variable. So you have to be not only a brewmaster

but a sociologist and a psychologist to produce a beer that has flavor.

Again we're not talking about accidents. Everybody can hazardously produce a good beer one time out of 10. Talk about producing eight beers out of 10 that are good, that fit your consistent style and fit into your life, and you have to make that a social decision.

New Era In Flavor

If we're at the threshold of another era in beer flavor, I think it's time to throw out the images, to not say, "I'm going to brew better ale than they brew in Britain," or "I'm going to produce better steam beer than Fritz Maytag ever did." I think that's the wrong approach. It's an immature approach. It's the approach of people groping for a sense of style that we, as an industry and a movement, are just stepping over that threshold. We're so insecure that all we can cling to is our imagined sense of what great beers have been in the past. We can easily make the mistake of clinging to that so tightly that we never brew the beer that we're capable of, that we never produce the beer that really fits where we are and that never expresses our own sense of style.

I'm advocating upping the ante to not just brewing beer, but to knowing yourself in the process of brewing beer. Think about consistency, think about the way the beer belongs where you are, and throw out the examples of history that we all use as the first step. I think unless the genetically-engineered enzymes take over, we're at the threshold where our creativity is at its maximum.

In the last five years, we finally have access to all of the ingredients we may ever need to produce beer in any style we choose to make. We finally have all of the control we ever need, even as five-gallon-batch homebrewers. And finally, I think, we are beginning to develop a sense of confidence that will produce the local beer wherever we are. In five years I would like to see no categories in homebrew competitions. I would like to see the local beer as being the beer that we brew. And when that day comes, I think we will have reached the threshold of the era of beer in the truly American style.

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ABOUT THE AUTHORS

The People Behind the Recipes

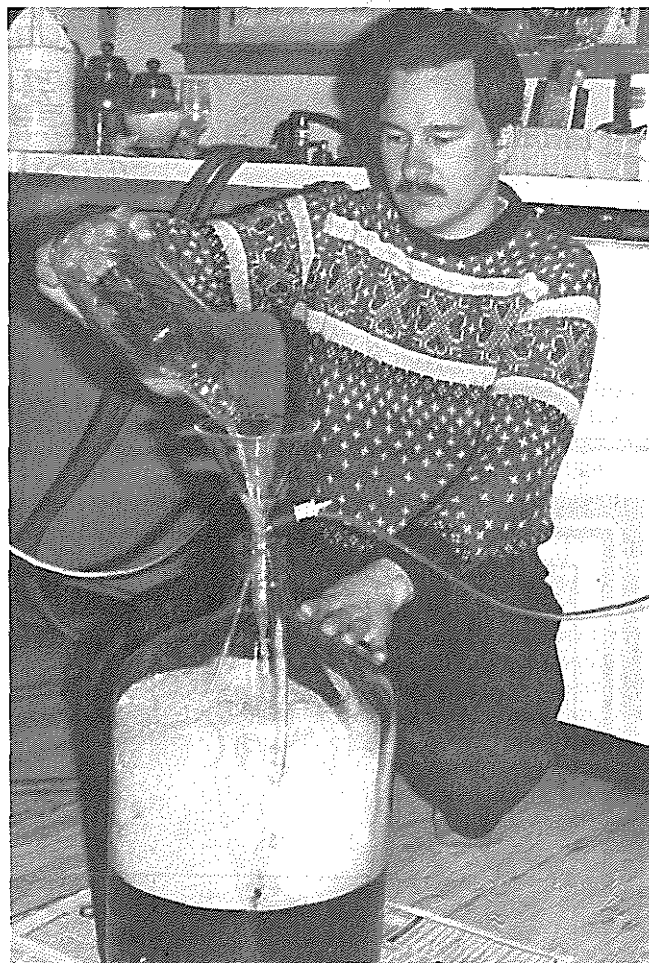
In a celebration of malt extract beers that can be simply and finely brewed, we have gathered here a compilation of favorite recipes from some nationally renowned homebrewers.

Everyone has a style of brewing, you have yours, we have ours, and that's what we love about our art. The more we can learn and share about beer styles, what makes them what they are and how we can produce what we want, the better brewers we will become.

Try some of these recipes that appeal to you and see how they will help you to discover what you like in the taste of beer.

zymurgy, it says on the cover, is "For the Homebrewer and Beer Lover." **Charles Hiigel**, of San Luis Obispo, Calif., is a member of the AHA strictly as the latter. He has never brewed beer. As the head beer-tender and beer-fanatic-in-residence at Spike's Place Restaurant (the beer connoisseur's refuge between Los Angeles and San Francisco) it is his duty to be up-to-date and intimately familiar with all the commercially brewed beers available in the California market at any given time. He claims this is a full-time job that would leave very little time for drinking his own homebrew. (Sure, it's tough, but somebody's got to do it.) Charles enjoys being in the front line of the fight to convert large segments of the American public into beer connoisseurs. Besides presiding over beer appreciation at the restaurant, he offers an annual five-week survey of the world's beer styles and traditions and coordinates the International Festival of Beers (a one-day survey of the world's beer styles) as a fund-raiser for local charities. Charles wrote all the introductory descriptions for the beer styles in this article.

Gary Bauer is the brewmaster of Vienna Brewing Co., owner of Brewing Specialties homebrew supply shop, brewing consultant to several breweries, a chemist and a long-time homebrewer. He lives in one of the great brewing cities of the world, Milwaukee, Wis., which was once known as "New Munich." Gary started homebrewing in 1970 while in college and has never stopped. He went from extract brewing to all-grain brewing and experimented with yeasts from Milwaukee to Munich, West Germany. He designed a five-gallon brewery capable of controlling fermentation temperatures and producing sparkling, clear bottled beer. His determination paid off by helping him win numerous awards in national AHA competitions. He insists that homebrewers are the greatest beer formulators and brewers in the



Gary Bauer, Milwaukee, Wis.

country and continues to share brewing knowledge with his friends and fellow homebrewers.

Byron Burch is nationally recognized as an expert on homebrewing and winemaking, and has instructed others in these arts for the past 14 years. During the past eight years he has been co-owner of Great Fermentations, a homebrew supply company with outlets in San Rafael and Santa Rosa, Calif. His first book, *Quality Brewing*, was a major influence in the growth of the homebrew movement during the 1970s and early 1980s, selling 80,000 copies. It has just been extensively rewritten, and is being published in June 1986 as *Brewing*



Byron Burch, Santa Rosa, Calif.

Quality Beers. He has addressed both the AHA and the Home Wine and Beer Trade Association national conferences, and is a frequent contributor to *zymurgy*. His writings have appeared in *Home Fermenter's Digest* and *The American Wine Society Journal*. He claims to be a "frustrated, occasional poet," and, in fact, he once won a poetry scholarship in college. He holds a master's degree in literature from San Francisco State University.

John Canaday (Colonel John) made his very own first batch of homebrew 30 years ago using the time-honored but now outdated sugar recipe. A friend recom-

mended three pounds of Blue Ribbon malt, three pounds of table sugar and a package of baker's yeast. Although the beer was not great, it was acceptable, and John had no trouble getting friends to help drink it.

John is now dedicated to all-malt extract beer brewed with special beer yeast. He sells homebrewing supplies and strikes his personal blow for quality homebrew by advising beginners how to make a good batch of beer on their very first attempt.

Colonel John says the greatest barriers to good homebrew are the 10- to 15-year-old books still on the market that urge beginners to use large quantities (30 percent by weight or more) of refined white sugar.

John has been a devout and helpful member of the AHA and a contributor to *zymurgy* for many years.

Lois Canaday remembers as a little girl watching her father make homebrewed beer and wine, and learned in those early years that yeast could perform the magical task of converting sugars into alcohol. A valuable lesson indeed for a future homebrewer. Lois put this knowledge to good use when she helped her husband John make his first batch of homebrew and allayed the children's fears that a "revenooers" attack was imminent.

In 1986, Lois made her own first homebrew (a spruce beer), which received wide acclaim from all who were fortunate enough to taste it. Even Colonel John admits that it is a superb beer. With success on her doorstep, Lois has proceeded with a second brew, a Pilsener this time, and intends to try many more in the future.

As the author of *Treatise on Lager Beer*, now in its seventh edition, and former publisher of *The Amateur Brewer*, **Fred Eckhardt** was one of the first enthusiasts to emphasize the importance of all-malt brewing and the use of quality ingredients and techniques in homebrewing. Fred publishes *Listen to Your Beer*, a semi-monthly magazine for beer lovers. He is an Advising Editor for *zymurgy*, published five times a year by the AHA.

Terry Foster, a chemist, is a technical service specialist in the mining industry, a position that requires considerable travel throughout the world, with consequent opportunities to sample an enormous variety of beers. He started brewing in 1958 in England, and wrote many articles for both *Home Brewing Fermentation* and *Amateur Winemaker*. Always a keen student of beer-drinking, Terry has been a CAMRA member since 1973. In 1978, *Dr. Foster's Book of Beer* was published in England. This dealt not only with homebrewing, but

also with the history of beer and the social and technological aspects of modern British commercial brewing.

Now a U.S. citizen, Terry has lived here nine years and has written articles for **zymurgy**, *Amateur Brewer*, and *Home Fermenter's Digest*. He has given presentations at several AHA annual conventions and judged in many competitions. Apart from drinking beer, Terry is particularly interested in trying to translate the chemical complexities of brewing into simple techniques for producing quality beer at home.

As founding president of the AHA, editor of **zymurgy**, publisher of *The New Brewer* and the newly founded *Brewers Publications*, and author of the *Complete Joy of Home Brewing*, **Charlie Papazian** considers himself a full-time zymurgist. His travels and conference tours have taken him to breweries and homebrewers throughout the United Kingdom, Ireland, New Zealand, Canada and most areas of the United States.

Russell Schehrer's first homebrew experience took place in 1973 when his great-grandfather gave him a recipe off the top of his head; this concoction exploded after bottling. Much to his parents' dismay a beer fanatic had been hatched at the age of 16. In 1981 Russ took Charlie Papazian's course through the Boulder Free School. The first two solo efforts were interesting (the first, a lovely "white punk ale," was drinkable after all the mistakes mellowed—a time period of a couple years. Despair followed and he was ready to throw in the towel. A "make-it-or-break-it" batch proved successful and he was off (his parents' dismay diminished a tad when they could at least stomach the end product). After many experimental batches Russ was regularly producing good brew, had a stockpile of some 25 cases (which he was forced to will to his parents if he had any plans on continuing to use their kitchen) and decided to enter the AHA competition. Russ has had wonderful success in the two years he's entered competitions and is enthralled with the idea of microbreweries and brewpubs. Between beer, bicycling, motorcycling, mechanics, leather work and traveling, he hardly has time for a job. During the day Russ is a programmer-analyst, then in the evening he partakes of his hobbies.

Nancy Vineyard is the manager of Great Fermentation's Santa Rosa store. She was National Homebrewer of the Year in 1983, and has won five Best of Class Awards in national competition, as well as numerous local awards. She has taught brewing and beer apprecia-



Colonel John Canaday, Boulder, Colo.

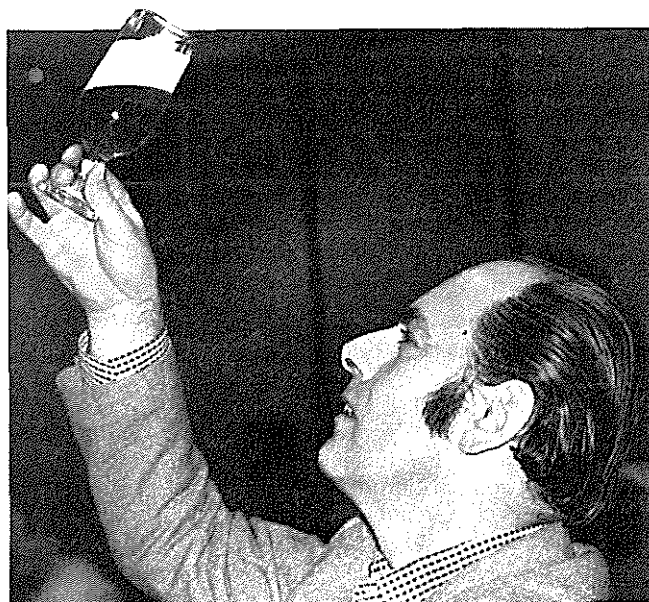


Lois Canaday, Boulder, Colo.

PHOTOS BY DAVID BJORKMAN/NATIONAL NEWS SERVICE



Fred Eckhardt, Portland, Ore.



Terry Foster, Milford, Conn.

tion classes for the last three years at Santa Rosa Junior College and continues to be an adviser for homebrewers and microbrewers. Nancy likes beer!

Ted Whippie is a lifelong beer drinker, going back to wartime 3.2-percent Navy beer. His homebrewing experience goes back only three years. It started following a trip to Europe when he found out how bad "bud-miller" was. He has practiced all phases of brewing—kits, malt extracts, extract-grains and all grains. His homebrews regularly place well in competitions.

Ted is a Certified Beer Judge of the National Beer Judge Certification Program. He has judged national competitions for the AHA and the Home Wine and Beer Trade Association as well as regional competitions in the East.

He is a regular member of the Underground Brewers homebrew club. He feels that the experience of blind tasting world-class commercial beers and homebrews in the club has been invaluable for him.

Ted makes his home in Newtown, Conn. He recently retired from his profession as a wood scientist. He and his wife Betty plan to do extensive traveling throughout North America and hopefully find a lot of homebrewers to keep his thirst for homebrew quenched as he has not yet worked out how to homebrew in a travel trailer.

In the spring of 1983 as homebrewing seminars sponsored by Bacchus & Barleycorn, Kansas, were about to conclude, some participants decided they didn't want to forego the sharing of homebrewing ideas, recipes, tastings and camaraderie with fellow brewers. A homebrew club, **The Kansas City Bier Meisters**, was formed.

During its first year this group of homebrewers representing the greater Kansas City area adopted a name and a logo followed by by-laws in the second year.

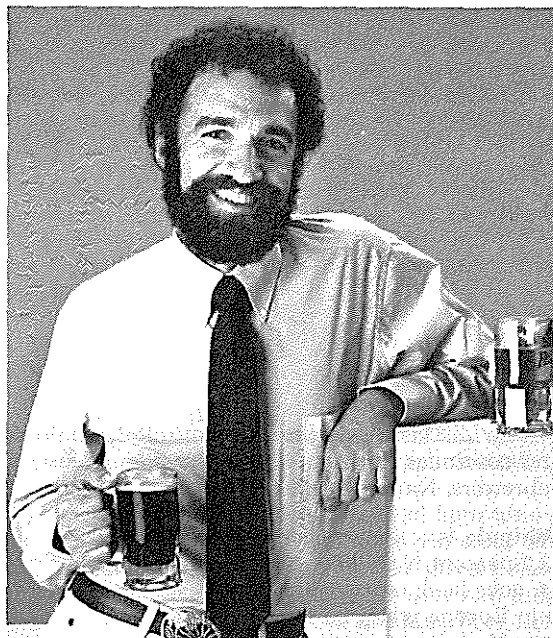
As well as monthly meetings and tastings, the Kansas City Bier Meisters have established festive traditions, including a Maifest and Oktoberfest, both outdoor festivals featuring kegged homebrew and German cuisine; a Christmas party and a February competition that attracted 77 entries in 1986. Their brewers compete in local and national competitions and have taken awards including Bruce's Brewery Challenge Cup 1985 and First Place American Pilsener, AHA 1984.

The Bier Meister's current project is producing and filming a homebrew video.

Founded in January 1982, **The Shasta County Suds'ers and Valley Vintners** are an active club of 163

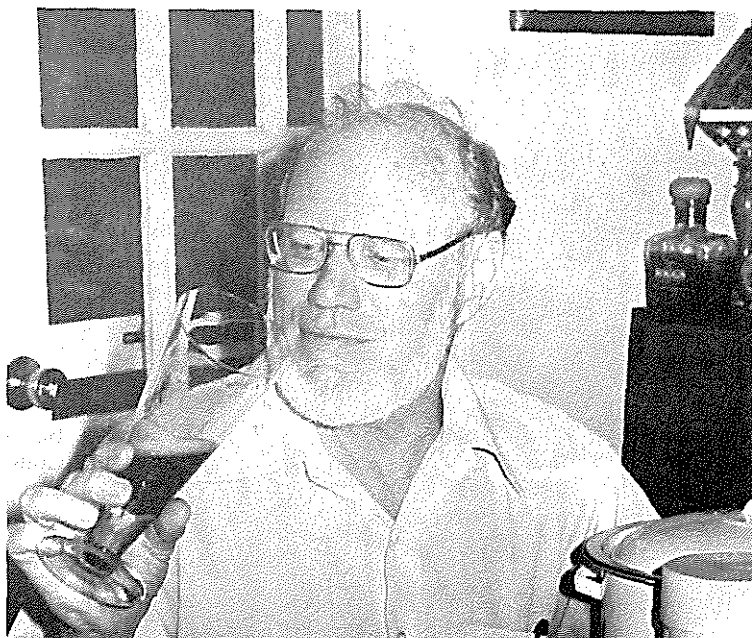
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PHOTO BY MICHAEL LICHTER



Charlie Papazian, Boulder, Colo.

PHOTO BY KAREN VALENTA



Ted Whipple, Newtown, Conn.

PHOTOS BY DAVID BJORKMAN/NATIONAL NEWS SERVICE



Russell Schehrer, Denver, Colo.



Nancy Vineyard, Santa Rosa, Calif.

thirsty souls, drawing members from Shasta, Siskiyou, Tehama and Trinity counties.

Shasta County is located at the upper end of the great Sacramento Valley in California in the shadow of two active volcanoes, Mt. Shasta and Mt. Lassen. Temperatures range from 26 to 120 degrees F.

Club activities include contests, both local and national, an annual potluck and Christmas party, as well as monthly meetings. Joining ranks with the Butte County Brew Crew of Chico, the Suds'ers scheduled a

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North Valley Oktoberfest for the fall.

Exhibiting greater recognition of their craft, the Shasta district fair has incorporated a homebrew and winemaking competition, which they expect will again increase their club membership.

Located in the fruit growing heartland of California, the Suds'ers have been a wine and brew club from inception. They find this increases the number of women within their club and gives a broader scope of topics for monthly meetings.

TIPS AND HINTS

Guidelines to Using Recipes

These are simple guidelines well suited for success in brewing malt extract beers. You may develop your own variation on these techniques that will work with your equipment and brewing routine.

Using Specialty Malts: Crush the grains (a rolling pin works well for crystal, roasted barley or black patent; grain mills must be used for other malts). Boiling the grains in the wort can contribute astringent grainy flavors and a haze to your beer. Rather than boiling the grains, we recommend that you add them to 1½ gallons of cold water in your brewpot, bring that to a boil and remove the grains with a small strainer. Then continue boiling the wort.

Boiling the wort: Dilute your malt extracts with as much water as is practical to boil. Lower sugar concentrations will give better hop bitterness yields. When the water is boiling, add malt extracts, any other sugars, minerals and boiling hops. Stir well to dissolve the ingredients and prevent them from scorching. Begin timing your boil when it starts again after all of the ingredients have been added. One-half to one hour is an adequate boiling time to extract bitterness from the hops. Finishing hops for flavor and aromatics should be added during the final 1 to 10 minutes of the boil. Water treatment minerals can be added at the start of the boil. Irish moss (¼ teaspoon for 5 gallons) can be added during the final 5 to 10 minutes of the boil to help settle proteins and clarify the beer.

Sanitizing equipment: Once the wort has stopped boiling, anything that comes in contact with it from that point on should be sanitized. This can most easily be done in a solution of 1 to 2 ounces of household (chlorine) bleach to every 5 gallons of cold water. Soak the objects for 20 minutes then rinse thoroughly with hot tap water. This includes all sparging, fermenting, siphoning and bottling equipment.

Sparging, diluting, cooling and taking readings: Partially fill the fermenter with cold water. If there are no grains or hop flowers, add the hot wort directly to the fermenter. If there are grains or hop flowers, pass the wort through a strainer on its way to the fermenter and rinse the grains and hops with a little hot water. Dilute the wort in the fermenter with cold water to reach the desired volume. With the wort thoroughly mixed, remove a sample to take a temperature and original specific gravity reading. Do not return the unfermented beer sample to the fermenter.

Fermentation: Ale and most dried lager yeasts are best started at 70 to 80 degrees F and ale fermentation should be maintained at about 60 to 70 degrees F. When possible, lager fermentation temperatures should be kept down to 45 to 55 degrees F for best flavor. Choose between a closed (single-stage) or two-stage fermentation system. Gelatin finings may be added during fermentation (after 2 days) to aid in clarifying the beer. Dissolve ½ teaspoon gelatin in a small amount of cool water and allow to stand for one-half hour. Bring this mixture to a boil and add it to the beer.

Bottling: Bottle or keg the beer when fermentation is complete. Boil corn sugar or dry malt extract with a pint of water before adding it to the beer. Don't aerate or splash your beer when bottling and be sure your keg equipment or bottle caps and bottles are sanitized.

Keeping records: Keeping a log of recipes and procedures will enable you to duplicate favorite recipes and improve on them. Keep it simple so record-keeping doesn't become a bother; you won't regret it. Include: date, name of beer, batch size, ingredients and amounts used, time of boil, when and how grains and hops were added, temperature of wort when yeast was pitched, original specific gravity, date when beer was racked, date when bottled and amount of priming sugar, final specific gravity, and anything else you might want to say about that brew!

AHA Definitive Guide The Lowdown on Malt Extracts

COMPILED BY JILL SINGLETON

A year in the making, the AHA Definitive Guide to Malt Extracts is the most complete and concise reference to products available in the United States and Canada.

Whenever possible, we used information provided by the manufacturer. If the manufacturer's information was not available, we were provided valuable assistance by distributors of these products.

This Guide will be updated periodically. If you are aware of products not listed here, please bring them to our attention, giving the name of manufacturer and distributor.

| Manufacturer Name Place of Manufacture | Dry or Syrup | Package Size | Yeast Included? Yes or No | Hop Flavored? Yes or No | Barley Type | BU * per can | BU * per pound | Ingredients |
|--|-----------------|-----------------|---------------------------------|-------------------------------|----------------|--------------------|----------------------|--|
| Bermaline Ltd. Victoria Bridge, Scotland Bermaline Malt Extract | S | 3.5-pound can | N | N | | | | Scottish malted barley extract |
| Bierkeller Germany Premium German Malt Extract Unhopped Light | S | 3.3-pound can | Y | N | | | | German malt extract |
| Premium German Malt Extract Unhopped Amber | S | 3.3-pound can | Y | N | | | | German malt extract |
| Bruce's Brewery London, England Bruce's Home Brew Dogbolter | S | 4-pound can | Y | Y | | | | malt extract, hop extract, hops and packet of hop extract, yeast included |
| California Concentrates Acampo, California Alexander's Sun Country Extra Pale Malt | S | 4-pound can | N | N | 2-row Klages | | | malted barley extract |
| Doric Denmark and Canada Doric Denmark Danish Lager Kits | S | 3.3-pound can | Y | Y | | | | hopped barley malt extract, dried brewing yeast (in separate packet) |
| Doric (Canadian) Extra Pale | S | 2.5-pound can | N | Y | | | | hopped malt and corn extract, caramel |
| Edme Ltd. Mistley, England Edme New Century Ale | | 4-pound can | Y | Y | | | | hopped malt extract, yeast |
| Edme Superbrew Light Beer | S | 3.5-pound can | Y | Y | | | | hopped malt extract, yeast |
| Edme Superbrew Pale Lager | S | 3.5-pound can | Y | Y | | | | hopped malt extract |

| | | | | | | | | |
|--|---|---------------|---|---|---------------|------|-----|--|
| Edme Superbrew Gold Bitter | S | 3.5-pound can | Y | Y | | | | hopped malt extract |
| Edme DMS Diastatic Light | S | 3.5-pound can | | N | | | | diastatic malt extra light |
| Edme SFX Super Flavex. Dark, Non-Diastatic | S | 3.5-pound can | | N | | | | super flavex dark |
| Edme Traditional Bitter | S | 4-pound can | Y | Y | | | | hopped malt extract |
| Kingsdown Brewery | | | | | | | | |
| Swindon, England | | | | | | | | |
| (prepared for Edme) | | | | | | | | |
| Arkell GWR (Strong Bitter) | S | 4-pound can | Y | Y | | | | hopped malt extract |
| Ironmaster | | | | | | | | |
| Durham, England | | | | | | | | |
| Ironmaster Special Lager | S | 4-pound can | Y | Y | 2-row English | 16.0 | 4.0 | hopped malt extract |
| Ironmaster Traditional Pale Ale | S | 4-pound can | Y | Y | 2-row English | 14.0 | 3.5 | hopped malt extract |
| Ironmaster Special Bitter | S | 4-pound can | Y | Y | 2-row English | 18.0 | 4.5 | hopped malt extract |
| Ironmaster Special Export Bitter | S | 4-pound can | Y | Y | 2-row English | 16.0 | 4.0 | hopped malt extract |
| Ironmaster Northern Brown Ale | S | 4-pound can | Y | Y | 2-row English | 12.8 | 3.2 | hopped malt extract |
| Ironmaster Scottish Mild Ale | S | 4-pound can | Y | Y | 2-row English | 14.0 | 3.5 | hopped malt extract |
| Ironmaster Special Stout | S | 4-pound can | Y | Y | 2-row English | 19.2 | 4.8 | hopped malt extract |
| Ironmaster Barley Wine | S | 2.2-pound can | Y | Y | 2-row English | 8.8 | 4.0 | hopped malt extract |
| Hansberg Export | | | | | | | | |
| Germany | | | | | | | | |
| Dortmunder Light | S | 3.3-pound can | Y | N | | | | malted barley extract |
| Bavarian Bock Beer | S | 3.3-pound can | Y | N | | | | malted barley extract |
| Oktoberfest Amber Ale | S | 3.3-pound can | Y | N | | | | malted barley extract |
| Viking Brewing Ltd. | | | | | | | | |
| Hertsfordshire, England | | | | | | | | |
| Geordie Lager | S | 3.3-pound can | Y | Y | 2-row English | 0.9 | 0.3 | hopped malt extract, caramel |
| Geordie Mild | S | 3.3-pound can | Y | Y | 2-row English | 2.7 | 0.8 | hopped barley malt extract, caramel |
| Geordie Bitter | S | 3.3-pound can | Y | Y | 2-row English | 3.4 | 1.0 | hopped barley malt extract, caramel |
| Geordie Scottish Export | S | 3.3-pound can | Y | Y | 2-row English | 3.0 | 0.9 | hopped barley malt extract, caramel |
| Geordie American Light | S | 3.3-pound can | Y | Y | 2-row English | 1.5 | 0.5 | hopped barley malt extract, caramel |
| Geordie Original Extra Strong | S | 3.3-pound can | Y | Y | | | | hopped barley malt extract, caramel |
| Geordie Yorkshire Bitter | S | 3.3-pound can | Y | Y | | | | hopped barley malt extract, caramel, calcium chloride, salt |
| Geordie Gold Medal Lager | S | 4-pound can | Y | Y | 2-row English | 1.1 | 0.3 | hopped malt extract, dried brewing yeast, caramel |
| Geordie Gold Medal Bitter | S | 4-pound can | Y | Y | 2-row English | 4.3 | 1.1 | hopped barley malt extract, caramel |
| Geordie Gold Medal Export | S | 4-pound can | Y | Y | 2-row English | 3.3 | 0.8 | hopped barley malt extract, caramel |
| Ireks-Arkady | | | | | | | | |
| Germany | | | | | | | | |
| Ireks Munich Light | S | 6.6-pound can | N | N | | | | malted barley extract |
| Ireks Munich Amber | S | 6.6-pound can | N | N | | | | malted barley extract |
| Itona Products | | | | | | | | |
| Wigan, England | | | | | | | | |
| Kwoffit Export Hofstar Lager | S | 4-pound can | Y | Y | | | | wort (malt including pilsen malt and barley, sugar and hops) |
| Kwoffit Export Bitter Ale | S | 4-pound can | Y | Y | | | | wort (malted barley, sugar and hops) |
| Kwoffit Export Club Mild | S | 4-pound can | Y | | | | | wort (malted barley, sugar and hops) |
| Kwoffit Export Mixed (Mild & Bitter) | S | 4-pound can | Y | Y | | | | wort (malted barley, sugar and hops) |
| Kwoffit Export Irish Stout | S | 4-pound can | Y | Y | | | | wort (malted barley, sugar and hops) |
| Mountmellick Products Ltd. | | | | | | | | |
| Mountmellick, Ireland | | | | | | | | |
| Mountmellick Light Lager | S | 4-pound can | Y | Y | | | | hopped malt extract, dried brewing yeast |
| Mountmellick Export Ale | S | 4-pound can | Y | Y | | | | hopped malt extract, dried brewing yeast |

| Manufacturer Name Place of Manufacture | Dry or Syrup | Package Size | Yeast Included? Yes or No | Hop Flavored? Yes or No | Barley Type | BU* per can | BU* per pound | Ingredients |
|---|-----------------|-----------------|---------------------------------|-------------------------------|----------------|----------------|------------------|--|
| Munton & Fison, PLC Suffolk, England | | | | | | | | |
| Munton & Fison Light | S | 3.3-pound can | N | N | | | | malted barley extract |
| Munton & Fison Amber | S | 3.3-pound can | N | N | 2-row English | | | malted barley extract |
| Munton & Fison Dark | S | 3.3-pound can | N | N | 2-row English | | | malted barley extract |
| Munton & Fison Light | S | 3.3-pound can | N | Y | 2-row English | 7.5 | 2.3 | hopped malted barley extract |
| Munton & Fison Diastatic | S | 3.3-pound can | N | | 2-row English | | | malted barley extract |
| Munton & Fison Old Ale | S | 3.3-pound can | Y | Y | 2-row English | 12.5 | 3.8 | hopped malted barley extract, d-glucitol |
| Munton & Fison American Lite | S | 3.3-pound can | Y | Y | 2-row English | 5.75 | 1.7 | hopped malt extract, glucose syrup |
| Munton & Fison Lager | S | 3.3-pound can | Y | Y | 2-row English | 7.5 | 3.5 | hopped malt extract |
| Munton & Fison Premium | S | 3.3-pound can | Y | Y | 2-row English | 12.5 | 3.8 | hopped malted barley extract |
| Munton & Fison Stout | S | 3.3-pound can | Y | Y | 2-row English | 13.75 | 4.2 | hopped malt extract |
| Munton & Fison Light—Hopped Dried Malt Extract | D | 3 pounds & bulk | N | Y | 2-row English | 7.5 | 2.3 | |
| Munton & Fison Amber—Hopped Dried—Malt Extract | D | 3 pounds & bulk | N | Y | 2-row English | 11.5 | 3.5 | |
| Munton & Fison Dark—Hopped Dried—Malt Extract | D | 3 pounds & bulk | N | Y | 2-row English | 11.5 | 3.5 | |
| Munton & Fison Extra—Dark Dried—Malt Extract | D | 3 pounds & bulk | N | N | 2-row English | | | |
| Munton & Fison Amber Dried—Malt Extract (plain) | D | 3 pounds & bulk | N | N | 2-row English | | | |
| Munton & Fison Dark Dried—Malt Extract (plain) | D | 3 pounds & bulk | N | N | 2-row English | | | |
| Munton & Fison Old Ale | S | 3.3-pound can | Y | Y | | | | hopped malt extract, d-glucitol |
| Munton & Fison Light Dried—Malt Extract (plain) | D | 3 pounds & bulk | | N | | | | |
| Paines PLC St. Neots, England | | | | | | | | |
| John Bull Light (plain) | S | 3.3-pound can | N | N | | | | malted barley extract |
| John Bull Amber (plain) | S | 3.3-pound can | N | N | | | | malted barley extract |
| John Bull Dark (plain) | S | 3.3-pound can | N | N | | | | malt extract (malted barley, water), caramel |
| John Bull Light (hopped) | S | 3.3-pound can | N | Y | 2-row English | 9.0 | 2.7 | hopped malted barley extract |
| John Bull Amber (hopped) | S | 3.3-pound can | N | Y | 2-row English | 10.0 | 3.0 | hopped malted barley extract, caramel |
| John Bull Dark (hopped) | S | 3.3-pound can | N | Y | | | | hopped malted barley extract, caramel |
| John Bull American Beer | S | 3.3-pound can | Y | Y | 2-row English | 4.5 | 1.4 | malt extract, hops, iso-hop extract |
| John Bull American Lite | S | 3.3-pound can | Y | Y | 2-row English | 5.3 | 1.6 | malt extract, hops, corn syrup, iso-hop extract |
| John Bull Canadian Beer | S | 3.3-pound can | Y | Y | | | | malt extract, hops, corn syrup, iso-hop extract |
| John Bull English Ale | S | 3.3-pound can | Y | Y | | | | malt extract, hops, caramel, iso-hop extract |
| John Bull English Ale (low carbohydrate) | S | 3.3-pound can | Y | Y | | | | malt extract, corn syrup, hops, iso-hop extract |
| John Bull European Lager | S | 3.3-pound can | Y | Y | | | | malt extract, hops, iso-hop extract |
| John Bull European Lager (low carbohydrate) | S | 3.3-pound can | Y | Y | | | | malt extract, hops, iso-hop extract |
| John Bull Stout | S | 3.3-pound can | Y | Y | | | | malt extract, hops, iso-hops, roasted barley, caramel, hop extract |
| John Bull Master Class Lager | S | 4-pound can | Y | Y | 2-row English | 13.5 | 3.4 | malt extract, iso-hop extract, coloring, caramel, pelletized Hallertauer hops, glucose, Irish moss, sodium bicarbonate |
| John Bull Master Class Bitter | S | 4-pound can | Y | Y | 2-row English | 18.0 | 4.6 | malt extract, iso-hop extract, coloring, caramel, pelletized Kent hops, glucose, Irish moss, sodium bicarbonate |

Laaglander
The Netherlands

| | | | | | | | | |
|-------------------------------------|---|-----------------|---|---|----------------|------|-----|---|
| Laaglander Traditional Strong Ale | S | 3.3-pound can | Y | Y | 2-row Cont. | 10.5 | 3.2 | hopped malt extract, roasted barley, caramel |
| Laaglander Irish Stout | S | 3.3-pound can | Y | Y | 2-row Cont. | 15.0 | 4.5 | hopped malt extract, malted barley, caramel |
| Laaglander Irish Ale | S | 3.3-pound can | Y | Y | | 9.0 | 2.7 | hopped malt extract, caramel |
| Laaglander Light Dried Malt Extract | D | 3 pounds & bulk | | N | | | | |
| Laaglander Amber Dried Malt Extract | D | 3 pounds & bulk | | N | | | | |
| Laaglander Dark Dried Malt Extract | D | 3 pounds & bulk | | N | | | | |
| Laaglander Strong Ale | S | 3.3-pound can | Y | Y | | | | |
| Premier Malt Products, Inc. | | | | | | | | |
| Detroit, Michigan | | | | | | | | |
| Premier Light | S | 2.2-pound can | Y | N | | | | hopped malted barley extract |
| Premier Extra Ale | S | 2.2-pound can | Y | Y | | | | hopped malted barley and corn |
| Premier Pale Dry | S | 2.2-pound can | Y | Y | | | | hopped barley malt and corn |
| Premier Light | S | 2.2-pound can | Y | Y | | | | hopped barley malt |
| Premier Dark | S | 2.2-pound can | Y | Y | | | | hopped barley malt |
| Premier Reserve Gold Label | S | 3.3-pound can | Y | Y | | | | hopped malted barley extract |
| Specialty Products Int'l. | | | | | | | | |
| Chapel Hill, North Carolina | | | | | | | | |
| Superbrau Canadian Lager | S | 3.125-pound can | N | Y | 6-row American | 5.9 | 1.9 | hopped malted barley extract, corn syrup |
| Oktoberfest Amber | S | 3.125-pound can | N | Y | 6-row American | 5.9 | 1.9 | hopped malted barley extract, corn syrup, calcium sulfate |
| Tom Caxton | | | | | | | | |
| England | | | | | | | | |
| Tom Caxton Scottish Ale | S | 3.3-pound can | Y | Y | | | | hopped malt extract, dried isinglass finings |
| Tom Caxton Pilsner Strong Beer | S | 3.3-pound can | Y | Y | | | | malt extract, hop extract, dried isinglass finings, unmalted barley syrup |
| Tom Caxton Export Strong Bitter | S | 3.3-pound can | Y | Y | | | | hopped malt extract, dried isinglass finings |
| Tom Caxton Best Bitter | S | 2-pound can | Y | | | | | hopped malt extract, dried isinglass finings |
| Tom Caxton Midland Mild | S | 2-pound can | Y | Y | | | | (unmalted) barley syrup, malt extract, caramel, hops |
| Tom Caxton Irish Stout | S | 2-pound can | Y | Y | | | | hopped malt extract |
| Tom Caxton Barley Wine | S | 2-pound can | | Y | | | | hopped malt extract |
| Unican Foods, Ltd. | | | | | | | | |
| Bristol England | | | | | | | | |
| Unican Light Ale | S | 3.13-pound can | Y | Y | | | | concentrated hopped barley malt wort, caramel, ammonium sulfate, calcium sulfate, citric acid |
| Unican Extra Strong Lager | S | 3.13-pound can | Y | Y | | | | concentrated hopped barley malt wort, sodium chloride, ammonium sulfate, citric acid |
| Unican Northern Mild | S | 3.13-pound can | Y | Y | | | | concentrated hopped barley malt wort, caramel, sodium chloride, ammonium sulfate, citric acid |

CHARLES HIIGEL
EDITED BY CHRISTINE SCHOUTEN
ILLUSTRATED BY STEVE LAWING

A HOMEBREW COOKBOOK

Beer Styles and Recipes

CONTINENTAL LIGHT LAGERS (VARIATIONS ON PILSENER)

In the beginning, there was ale. All brewers employed a yeast that worked at the top of the fermentation vessel. Over the years, it was observed that if the fermentation temperatures could be kept very low, the yeast would sink to the bottom, and with an extended aging time (lagering) the result was a pleasingly clear beer. As the industrial revolution made refrigeration commercially feasible, brewers in Vienna, Austria; Munich, Germany; and Plzeň, Czechoslovakia, perfected bottom fermentation at about the same time. But it was the Pilsen brewery that achieved the greatest breakthrough: a beautiful, brilliant, golden-colored beer.

It has been suggested that a contributing factor to the rapid spread of popularity of the new beer was that the industrial revolution also had made glassware economical enough for the everyday beer drinker, slowly replacing pewter and ceramic steins. The visual appeal of a beer suddenly became an important part of the beer's enjoyment—and nobody had ever seen a beer that looked as nice as Pilsener. But whatever the reasons, Europe's beer-drinking habits underwent more change in the middle years of the 19th century than in all the history of brewing up to that time. The old style of brewing was left to the British Isles and pockets of resistance in Belgium; Cologne and Düsseldorf, Germany.

As the lager revolution spread, a few classic variations on Pilsener became associated with some of the great brewing cities. The Carlsberg Brewery, whose pioneering research led to the first isolation of a single-cell yeast culture, became famous for a lighter, more evenly balanced style, that probably has more imitators worldwide than the original Pilsener. Dortmund became associated with a slightly stronger, slightly maltier variation. The thirst of America's Great Plains and the wide availability of corn led European immigrant brewers to a much lighter, more refreshing brew we call "American Pilsener." The Bavarians, whose roots were in dark beers, finally have drifted into lighter-colored brewing styles, but still maintain the robust maltiness of the original "Münchners."

PILS

The drink of preference all over Germany remains the local interpretation of Pilsener, often abbreviated to

just "Pils." In many cases, the name of the beer is simply the name of the town with the "-er" suffix (e.g. "Warsteiner" and "Bitburger"). These beers are even drier than Pilsner Urquell, and the selection and use of the hops (particularly in bittering applications) are each brewer's source of individuality. The color is light to gold, and the use of 100 percent malt gives the beer full body and a background sweetness. The long aging times at cold temperatures result in the yeasty flavor components all but dropping out, leaving the hops and malt to play for the attention of the palate. These beers are ideally served at between 45 and 50 degrees F, and the bitterness makes an excellent way to awaken the tastebuds during the early courses of a meal.

DORTMUNDER

Europe's greatest brewing city has given its name to a beer style, but its largest breweries primarily export a traditional Pils. A proper Dortmunder, also referred to as "Special" or "Export," should be less dry than a Pils, but not as malty as the Münchners, and a little stronger than either. The roundness of flavor and full body make this the greatest of the Pilsener variations for serving with your main course. Serve at 50 degrees F in a stemmed tulip goblet.

Tasting reference:

Contrast Dortmunder Union Pilsener-type beer with Dortmunder Kronen Classic (a Pils vs. a Dortmunder).

MÜNCHNER HELL (Munich "Blonde")

The very conservative Bavarians were the last to adapt light-colored beers, so it's not surprising that their variation on Pilsener still maintains the malty palate of their dark beers. Hops are used generously, but almost entirely for bitterness, so the aroma is pure malt. Although these beers are very robust, they are brewed to a lower alcohol strength than the other Pilsener types—a wise practice considering the tradition of serving this beer in full-liter portions. Münchners should be only slightly chilled and are recommended when the beer is the main course.

Tasting Reference:

Contrast two beers from the same Bavarian brewery; for instance, Spaten Pils vs. Spaten Munich Light or

Paulaner Urtyp vs. Paulaner Pils. Contrast Pilsner Urquell with Carlsberg. Caution: the odds are against finding fresh examples of European light lagers, but that's why you're homebrewing, right?

"Bauer's European Light Lager" **Gary Bauer**

The freshest ingredients, coldest aging, and purest yeast are essential to produce the classic light lager. The use of all malt produces a slightly fuller-bodied, more flavorful beer than the American counterpart.

Recipe for 5 gallons

6 lbs. dry light hopped malt extract
¼ lb. crushed crystal malt
¼ oz. Saaz hops for finishing
2 pkts. Red Star lager yeast
¼ C. corn sugar for bottling
Original gravity: 1.045

Add the crushed crystal malt to 1½ gallons of cold water and bring to a boil. When the boil starts, remove the grains with a strainer and add the malt extract. Boil for one hour, adding the Saaz hops for the last 10 minutes. Strain and sparge the wort into cold water to make 5 gallons.

Add yeast when the temperature is below 75 degrees F and ferment at 50 to 55 degrees F until done. Age at 35 at 40 degrees F for 3 weeks. Bottle condition at 40 to 50 degrees F for 4 weeks.

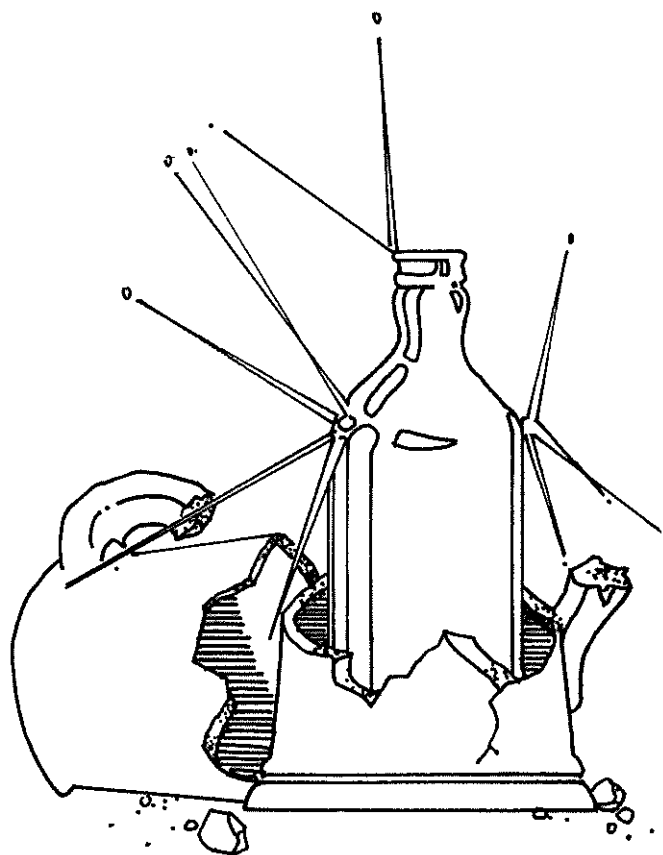
"Continental Pilsener Style" **Fred Eckhardt**

You cannot produce a true continental flavor in your beer without the use of Hallertauer or Saaz hops, and continental malt extracts. Since warmer fermentation temperatures will alter the flavor characteristics, cool is best for this lager.

German beer often is consumed a little warmer than American palates call for; that is, about 50 to 55 degrees F.

Recipe for 5 gallons

3.3 lbs. Hansberg Dortmunder light malt extract syrup
2½ lbs. pale dried malt extract
1½ oz. Saaz hops (6 percent alpha resin), for bittering



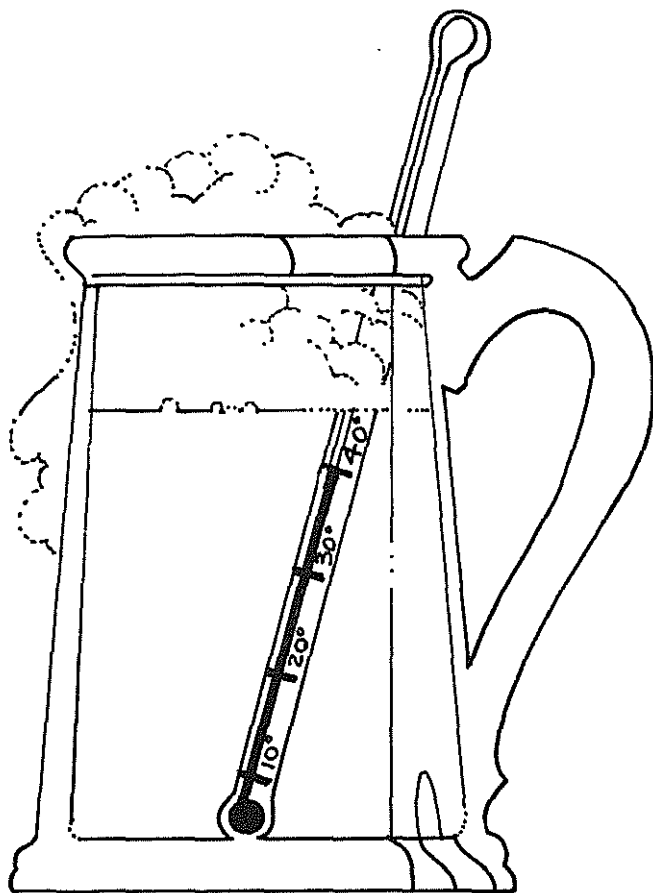
½ oz. Saaz hops for aroma
½ oz. Saaz hops for dry hopping
A good lager yeast; if Red Star, use 3 pkts.
Dry malt extract for bottling
Original gravity: 1.044
Final gravity: 1.009
Alcohol content: 3.7 percent by weight (4.7 by volume)

Bring 2 gallons of water to a boil, add the dry extract, mixing it well, then the Hansberg extract syrup. Return to a boil and after 15 minutes add half the bittering hops. One-half hour later add the rest of the bittering hops and continue boiling for 30 minutes. Add the aromatic hops, remove from heat and let the wort settle for 30 minutes. Sparge into cold water to make 5 gallons and add the dry-hopping pellets.

Add the yeast at 65 to 70 degrees F and ferment at 55 degrees to final gravity plus 2 points. Rack and finish the ferment at 40 degrees, then lower the temperature to 32 degrees and lager for about one month for each 25 original gravity points. Add additional lager yeast, dry malt extract or extra wort for kraeusening when bottling.

"Continental Light Lager" **Shasta County Suds'ers - Myron Moore**

This very simple recipe won first place in its class at the 1985 Home Wine and Beer Trade Association Annual Competition.



Alexander's malt syrup is chosen for its exclusive use of Klages malted barley in its formulation. While rendering a slightly darker than desired color, the malt gives a very fine flavor and good head retention.

Dry malt is chosen over corn sugar to achieve added body and flavor without the sourness of sugar.

Tettnanger hops were used because of their fine bittering qualities and the desire to achieve a continental beer character.

Jura hops, while quite difficult to acquire, have a very spicy, fruity nose, which makes this beer a delightful thirst-quencher for any occasion.

Recipe for 5 gallons

4 lbs. Alexander's plain malt syrup
1 lb. Munton and Fison light dry malt extract
1 1/4 oz. Tettnanger leaf hops, for boiling
1/2 oz. Jura leaf hops, for finishing
1 tsp. Irish moss
1 C. corn sugar, to prime
2 pkts. Red Star lager yeast
Original gravity: 1.042
Terminal gravity: 1.014

Add the malt extracts and boiling hops to 2 gallons of boiling water. Boil one hour adding the Irish moss for the last 5 minutes and the finishing hops for the last 2 minutes of the boil.

Strain and sparge into sanitized fermenter with cold water to make 5 gallons.

Pitch the yeast when temperature is below 75 degrees F and ferment at 50 to 55 degrees F. Bottle when fermentation is complete.

AMERICAN PILSENER

The style of beer that is so distinctively American evolved to meet the needs of a different kind of beer drinking. While most of America's brewers had their roots in Northern Europe, it didn't take long for them to realize that the great expanse of the frontier generated a different kind of thirst.

A look at a map will remind you that the southernmost of Europe's great brewing cities, Munich, is about the same latitude as Montreal. Copenhagen and Edinburgh are clear off the map. The point is—Europeans treat their beer like food. Americans have learned to treat beer as a thirst quencher. (We're not alone, by the way. Australia has virtually abandoned its British roots in favor of light lagers, many of which are mighty close approximations of the American style.)

Of course, it didn't hurt that the brewers were virtually surrounded by cheap and abundant corn, which not only makes a lighter-bodied brew, but one that can be priced more competitively.

Since the turn of the century, the emphasis on refreshment has become more exaggerated. Hops have been cut dramatically from brewer recipes in an effort to reduce bitterness and any prolonged aftertaste, and proportions of corn or rice have crept up to keep down the beer's maltiness. The result is not so much "the sum of its parts" as "the remainder that's left"—a beer style that can be called well-balanced because all the flavors are equally submissive.

The best of the American Pilseners have a mild hop character and a nice background fruitiness. The best will be free of flaws because it is easier to judge a light beer not on its positive attributes but on the absence of negative flavors, which are almost impossible to hide.

As for serving suggestions, rotate your stock. These beers have a very short shelf life. Serve cold, but not frozen. If a brewer is proud of his beer, he'll serve it no colder than 40 degrees F.

"Liberty Pilsener" Charlie Papazian

The tricks to brewing American Pilsener styles are many. Cleanliness is essential. A light hand with the hops is important. Cool fermentation temperatures really make a difference. There is no substitute for true lager yeast. Simplicity is a virtue. Liberty Pilsener is an American-style Pilsener that is light, refreshing and easy, yet well balanced with the hops.

Don't let the simplicity of this recipe deter you.

Recipe for 5 gallons

3½ lbs. plain light dried malt extract
4 Homebrew Bittering Units (I used 1 oz. of 4-percent
alpha acid Cascade hops) for boiling
½ oz. Cascade hops for finishing (I like my American
Pilseners with a lot of hop aroma but without the
bitterness)
2 pkts. lager yeast or liquid yeast culture
¾ C. corn sugar for bottling
Original gravities: 1.032 to -36
Terminal gravities: 1.008 to -12

Simply boil the malt extract and boiling hops in 1½
gallons of water for one hour. Add the finishing hops
during the final 2 minutes. Strain and sparge wort into
3½ gallons of cold water.

Pitch lager yeast when temperature is about 70
degrees F and attempt to continue fermentation at
temperatures as low as 45 degrees F if practical. Even
getting the temperature below 60 degrees F will help
tremendously.

**"American Pils"
Colonel John Canaday**

This Pilsener is quite pale in color and light in body,
with a hop bitterness and aroma character that surpass
that of most American Pilseners.

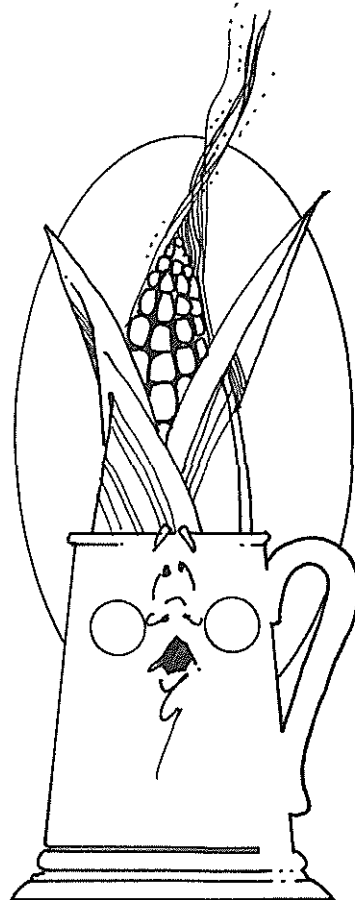
Recipe for 5 gallons

4 lbs. Alexander's pale malt extract
½ lb. light dry malt extract
1 C. (4 oz.) crushed crystal malt
8 Homebrew Bittering Units of Cascade hops for boiling
½ oz. Cascade hops for aroma
1 pkt. Red Star lager yeast
¾ C. corn sugar for bottling
Original gravities: 1.032 to 36
Terminal gravities: 1.008 to 12

Add the crystal malt to one gallon of water and heat
almost to boiling. Remove the grains and add the malt
syrup, dry extract and boiling hops. Boil for one hour.
Add the aroma hops during the last two minutes of
boiling.

Transfer the wort to the fermenter and add cold or
chilled water to make 5 gallons and reach a temperature
below 80 degrees F.

Add yeast and ferment below 60 degrees F, if possi-
ble. Prime and bottle when all signs of ferment have
stopped.



**"Yours is the One!"
Nancy Vineyard**

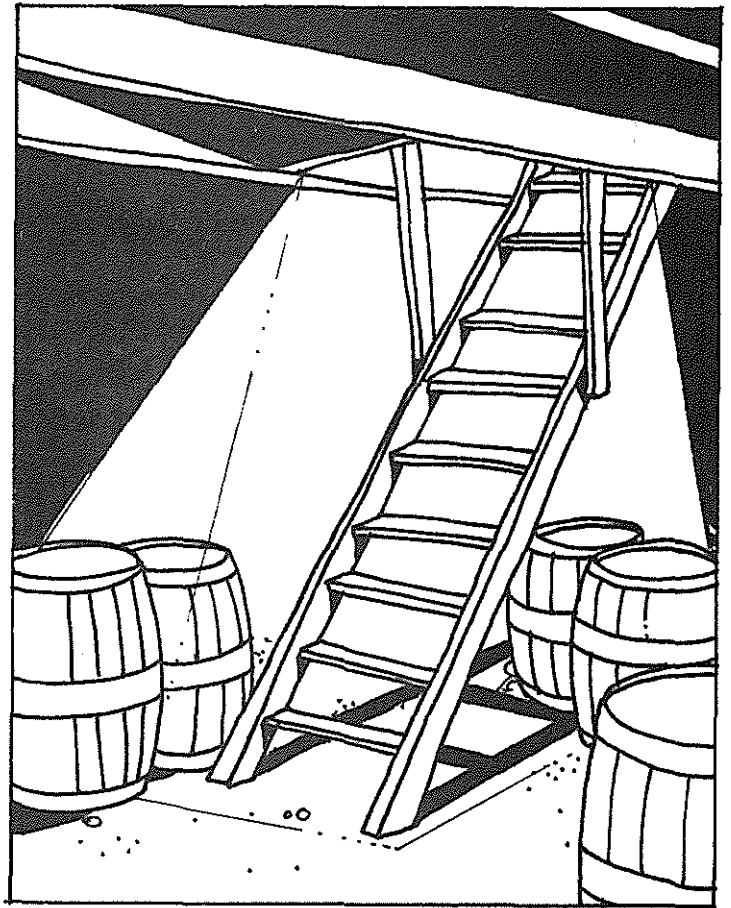
The balanced and delicate flavors of the classic
American Pilsener come from a blend of malt and rice
or malt and corn. This recipe favors rice to achieve a
crisp, clean-flavored lager, without bitterness or heavy
body. Try it with a blend of German hops to produce an
"import" or premium style of beer.

Recipe for 5 gallons

3.5 lbs. light dried malt extract
1 lb. rice syrup
¼ oz. Cluster hops, first bittering addition
¼ oz. Hallertauer hops, second bittering addition
½ oz. Hallertauer or Tettnanger hops for aroma
14 gr. Red Star lager yeast
1 C. corn sugar for priming
Original gravities: 1.034 to 38
Terminal gravities: 1.008 to 12

Dissolve all the dry malt and rice syrup in as much
water as your boiling kettle can hold and still allow
room for foaming in the head space. Bring the kettle to
a boil and add the first bittering hops, stirring to prevent
boilover. Boil for 35 minutes then add the second bitter-
ing hops. Continue boiling for 30 minutes, add the
aromatic hops and turn off the heat. Cover the pot and
cool in a water bath. Pour into a fermenter with water
to make 5 gallons and add the yeast. Cover and ferment
in a dark, cool place.

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PALE ALE

The amber color of a "pale" ale may lead the modern American drinker to wonder, pale compared to what?, forgetting that Brown Ale, Porter and Stout long preceded the reigning favorite in England.

A canal linking the inland brewing town of Burton-on-Trent to the North Sea port city of Hull opened up the outside world to the pleasures of Allsopp's and Bass by the late 1700s. "India Pale Ale" became a nickname for some of the stronger brews destined for the far reaches of the empire.) But it was not until the mid-1800s that Pale Ale invaded London's Porter stronghold. Such was the impact on London drinking that in the 1850s a couple of southern brewers opened branches on the Trent to take advantage of the local water. A six-shilling-per-barrel surcharge tacked on by Bass to cover war taxes in 1856 caused near revolt all over the country:

Farewell, my bright, my brisk, my pale,
I cannot say my sweet,
For thou art bitter, oh, my ale!
With hops, I trust, replete.

Henceforth thou art estranged from me;
And dost thou ask me why?
Thou wilt not suit my low degree,
Since thou hast got so high.

It was not wise to raise thee so,
'Tis what thou wilt not bear;
Better had thou been brought more low,
And made "not pale but fair."

Go travel o'er the ocean brine,
To grace some Nabob's cup;
Thy figure will not do for mine,
So I must give thee up.

With chamomile the goblet fill,
The cold infusion pour;
I'll quaff the dose, the draught I'll swill,
And sigh for thee no more!

The Lover's Farewell to Pale Ale
Punch Magazine, 1856

But Bass survived and prospered, and Pale Ales remained secure enough to withstand inroads made by lager beer in the 20th century, and are showing signs of increased popularity in the American market, particularly in the Pacific Northwest.

Bottled beer accounts for a very small percentage of British consumption, but it does serve its purposes. First, it allows a pub to offer a selection of beers aside from the house brand, including the stronger specialty beers from the same brewery. Second, bottles are considerably easier to take home and serve with dinner than barrels. Third, they're convenient for exporting beer to faraway places.

All three applications suggest the need for a longer shelf life, and the ability to withstand some abuse during handling. Draft Bitter, the traditional pub drink, is particularly fragile, so Pale Ale, the bottled version, is brewed to a higher strength (averaging around 5 percent alcohol by volume) and considerably greater carbonation, both of which help to stabilize the beer. Like Bitter, Pale Ale is aggressively hopped, but the maltness is likely to assert itself a little more in the stronger drink.

Tasting Reference:

Bass Ale, Samuel Smith's Pale Ale, Sierra Nevada Pale Ale

"Suffolk Special" Terry Foster

Obviously, a pale extract must form the foundation for this beer. Just a dab of crystal is added to improve mouthfeel and add a little nuttiness, without deepening the color. Many British imported pale ales are toned down for the U.S. market, but this has to be a noticeably bitter beer. So, with no roasted malts to hide any harshness, the hop bitterness must be very clean, which means using very fresh hops, making the widely available, medium alpha-acid (7 percent) Clusters a good choice. Goldings are the classical aroma hop for pale ales, giving a fruity spiciness, again, so long as they are good and fresh. The addition of a little gypsum, though optional, tends to improve the beer by making it a little drier, and by enhancing the hop bitterness.

Overall, this is a good full-bodied beer, with the sweetness of the malt partly hidden by its high bitterness. It has a fragrant, slightly spicy hop nose, and a good aromatic hop character that also helps to balance the bitterness.

Recipe for 5 gallons

7 lbs. pale malt extract syrup
2 oz. crushed crystal malt
2½ oz. Cluster hops for bittering
½ oz. Golding hops for aroma
½ tsp. gypsum
2 pkts. ale yeast or liquid ale culture
¼ C. corn sugar for priming
Original gravity: 1.048 to 1.052
Terminal gravity: 1.008 to 1.012

Mix the extract and crystal malt with 2 gallons of water. Bring this to a boil and strain out the grains; add the bittering hops and boil for one hour. At the end of the boil, add the aroma hops; let the wort cool for 5 to 10 minutes, strain out the hops and add the wort to cold water to make 5 gallons.

Pitch the yeast directly if dried or as a starter if using a liquid culture. Ferment out at 60 to 70 degrees F. Prime and drink when conditioned. This beer should be drunk at 50 to 55 degrees F; i.e. cool, not chilled.

"Falkland Island Pale Ale" Byron Burch

This is a good basic ale, solid as a rock, though more restrained than some in both amber color and caramel

taste. The dextrin powder gives it fullness and a slight touch of sweetness to balance the spicy flavors of Nugget and Northern Brewer hops. East Kent Golding hops add a distinctly British twist. The use of a favorite ale yeast could make this a brew worth fighting over.

Recipe for 5 gallons

3 lbs. British amber dry malt extract
2 lbs. British light dry malt extract
½ oz. 100 percent dextrin powder
2 tsp. gypsum
¼ tsp. Epsom salts
¼ tsp. salt
1 1/8 oz. Northern Brewer pellet hops, first bittering addition
1½ oz. Nugget pellets and 1/8 oz. Eroica pellets, second bittering addition
½ oz. East Kent Golding pellets for aroma (dry hopped)
14 gm. Muntona or EDME ale yeast
¼ C. corn sugar for priming
Original gravity: 1.038 to 1.042
Terminal gravity: 1.010 to 1.014

Dissolve all the dry malt, gypsum, Epsom salts, salt and dextrin powder in as much water as your boiling kettle can hold and still allow room for foaming in the head space. Bring the kettle to a boil and add the first bittering hops, stirring to prevent boilover. Boil for 30 minutes and add the second bittering hops. Boil for 30 more minutes. Turn off the heat, cover, and cool in a water bath. Pour into a fermenter with water to make 5 gallons and add the yeast and aromatic hops. Cover and ferment in a dark, cool place.

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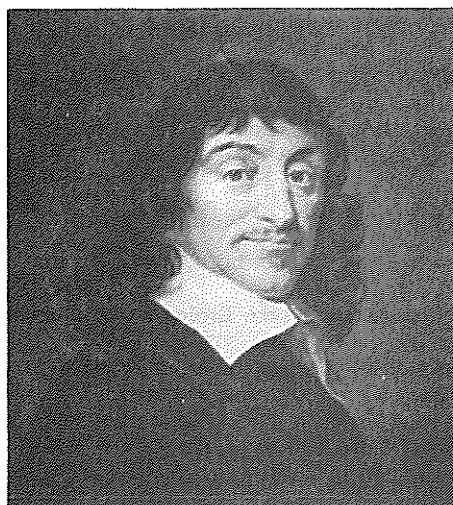
"Gold Rooster Pale Ale" Ted Whippie

Without question my favorite malt-extract brew is a pale ale made with all extract, some crystal malt for color and body, and moderate hoppiness. This is a good beer for day-to-day drinking. The only problem is that a batch doesn't last very long!

This beer is an excellent representation of the English Pale Ale style and better than many being imported into this country. It is not ultra hoppy but does have a hop bouquet, which is often lacking in the English brews. Because it is bottle conditioned, which takes about four weeks to be ready, the balance between malt and hops is very mellow with no yeasty overtones.

Recipe for 5 gallons

6.6 lbs. Munton and Fison plain light malt extract
½ lb. crushed crystal malt
1 tsp. water crystals if water is soft
1 oz. Northern Brewer hops for boiling
1 oz. Cascade hops for boiling (total 12 HBU for boiling)
1 tsp. Irish moss
1 oz. Cascade hops for finishing
2 pkts. EDME ale yeast
¼ oz. Cascade hops for dry hopping
1 tsp. gelatin finings
¼ C. corn sugar for priming
Original gravity: 1.044



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Philosophers disagree as to whether there can ever be too much hoppiness. Some prefer the spicy European Lager hops, others the clean, sharp Ale hops of the English tradition. Relatively new are the ultra bitter, high-Alpha acid muscle hops, and newest of all, the high-Aroma varieties. With hop strength anywhere from 3 to 13, you can't just think in terms of ounces anymore. That's why we put the alpha acid of that particular batch on the triple-laminated Barrier Bag, which keeps the hop strong and aromatic by keeping air and moisture out. We miss the aroma of hops in the store, we ship all the aroma to you!

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Add crystal malt to 2 gallons of cold water and bring to a boil. When near boil remove from heat, strain out grains and dissolve the extract and water crystals (if needed). Bring to a boil and after 30 minutes add the Northern Brewer hops; after 30 minutes more add the Cascade boiling hops and continue boil for 30 minutes adding Irish moss for the last 15 minutes. At the end of boil remove from heat, add the finishing hops and let the wort settle for 30 minutes. Sparge into a fermenter with cold water to make 5 gallons.

Pitch yeast at 75 degrees F. After a few days of fermentation, rack the beer and add the dry hops and gelatin.

Bottle when fermentation is complete and condition for 4 weeks.

"Amber Ale" **Russ Schehrer**

This beer was first brewed in fall 1982 from Charlie Papazian's first book. It is the simplest of my standard beers and is the most reliable (four years with the same basic recipe). The first batch was my first "good" beer and sealed my interest in homebrewing. The two ounces of Bullion hops referred to here may be a little too heavy-handed; that batch was excessively bitter. I have only made this beer with very hard water so some gypsum would need to be added with softer water. Although I dry hop now I have done a last-minute boil with the finish hops with little recognizable difference in beers. One of these batches took second place for Pale Ale in 1985.

Recipe for 5 gallons

6.6 lbs. Munton and Fison light extract or 6 lbs. dry light malt extract
1½ lbs. crushed crystal malt
2 oz. Cascade or 2 oz. Bullion hops for bittering
1 oz. Cascade hops for finishing
Pinch Irish moss
EDME ale yeast
¾ C. corn sugar to prime
Original gravity: 1.040 to 1.052
Terminal gravity: 1.012 to 1.019

Add the crystal malt to 2 gallons of cold water and bring to a boil. Strain out the grains, add the malt extract and return to a boil. Add the bittering hops and continue boil for one hour, adding Irish moss for the last 5 minutes. Add the finishing hops for the last minute of the boil or dry hop in your fermenter. Sparge into fermenter with cold water to make 5 gallons.

Pitch yeast at about 75 degrees F and bottle when fermentation is complete.

"India Pale Ale" **Gary Bauer**

This golden, hoppy classic has a relatively high rate of malt and alcohol. To acquire these same characteristics, generous portions of both malt and hops are used. The wood chips in this formula serve as a substitution for the original method of aging the beer "in wood for 40 days." The brown sugar contributes some extra flavor here.

Fuggle hops are chosen for their versatility for fine bitterness, flavor and aroma. The gypsum will harden the water to make it more typical of the region this ale was originally brewed in, and the salt adds a slight mineral bitterness to that.

Recipe for 5 gallons

3½ lbs. EDME English Bitter malt extract kit
4 lbs. light dried malt extract
1 C. light brown sugar
¾ oz. Fuggles hops for bitterness and flavor
¼ oz. Fuggles hops for aroma
2 tsp. gypsum
1 tsp. non-iodized salt
2 oz. light oak chips and the liquid boiled in EDME ale yeast (in kit)
¾ C. corn sugar for priming
Original gravity: 1.054

Mix extracts, brown sugar and minerals with 1½ gallons water and bring to a boil. Add bittering hops and boil for 30 minutes, adding the aroma hops for the last 5 minutes of the boil. Strain out the hops and add wort to

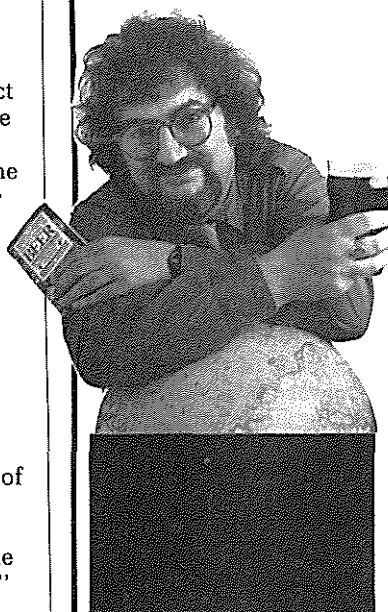
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cold water to make 5 gallons. Boil the oak chips in a pint of water for 5 minutes and add the chips and liquid to the primary after it has cooled.

Pitch yeast and ferment at 60 degrees F until done. Prime and bottle condition for 3 weeks at 50 to 60 degrees F and age for 3 weeks more.

"Classic India Pale Ale" **Ted Whipple**

Another of my favorite brews, especially for cold winter days (or nights), is the Classic India Pale Ale. My efforts don't quite reach the point of perfection of Ballantine's India Pale Ale, but on the other hand I don't "age in wood." Nevertheless, this is a mighty good beer.

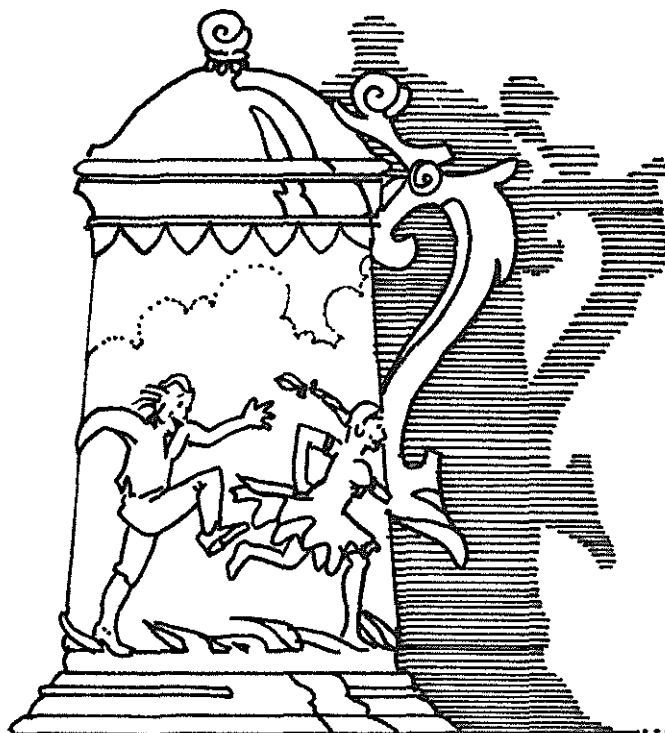
Because of higher alcohol content and high hopping, this brew should have six weeks of conditioning; and it will get better after that. I sure wish I still had some of my first batch; unfortunately, it was all gone while it was still getting better!

Recipe for 5 gallons

7 lbs. EDME DMS unhopped light malt extract
1 lb. Munton and Fison dried light malt extract
1 lb. crushed crystal malt
1 tsp. water crystals if water is soft
1½ oz. Northern Brewer hops for boiling
1 oz. Cascade hops for boiling (total 15.5 HBU for boiling)
1 tsp. Irish moss
1 oz. Cascade hops for finishing
½ oz. Cascade hops for dry hopping
2 pkts. EDME ale yeast
¼ C. corn sugar for priming
Original gravity: 1.056

Add crystal malt to 2 gallons of cold water and bring to a boil. When near boiling remove from heat and dissolve malt extracts and water crystals (if needed). Bring to a boil and add the Northern Brewer hops. Thirty minutes later add the Cascade boiling hops and continue boil for 30 minutes more, adding Irish moss for the last 15 minutes. At the end of the boil remove from heat, add the finishing hops and let the wort settle for 30 minutes. Sparge into fermenter with cold water to make 5 gallons.

Pitch yeast at 75 degrees F. Ferment for 3 days then rack, add dry hops and bottle when fermentation is complete. Condition for 6 weeks.



BROWN ALES

Brown Ales were probably the original beers. Most of the world's brewing styles can trace their origins to a general time and place, but Brown Ales have just always been there. Not surprisingly, among the surviving regional traditions, there is a wide range of opinion on what Brown Ale is.

In its British draft form, it's called Dark Mild; and is often the weakest brew a brewery will offer, with a gravity as low as 1.034. It is where many a young beer drinker gets his start, and where many an aging one returns when his capacity is no longer what it was.

The bottled versions, with names like John Brown Ale and Nut Brown Ale, vary regionally in strength from 5 percent to 6 percent alcohol by volume, with the stronger end of the scale widely available in the far north of England.

The common link between all interpretations of the style is an inclination toward the malty side, even to the point of being sweet. Carbonation always is minimal, and there is just a hint of hop aroma and bite. The bottled brown ales are particularly associated with British food, as is reflected by the fact that they outsell bottled Pale Ales.

Tasting References:

Samuel Smith's Nut Brown Ale or Newcastle Brown Ale.

"Brown Ale" **Colonel John Canaday**

This brew may have more alcohol and body than most browns because it is difficult not to use all of that second

can of malt syrup, once it is opened. Perhaps we can be forgiven this excess when the results are superior flavor, quality and aroma.

Recipe for 5 gallons

7 lbs. EDME SFX malt extract
½ lb. crushed crystal malt
½ C. crushed chocolate malt
10 Homebrew Bittering Units of Fuggle hops for boiling
½ oz. Fuggle hops for aroma
1 pkt. EDME ale yeast
¾ C. corn sugar for bottling
Original gravity: 1.050
Terminal gravity: 1.012

Add the grains to 3 quarts of water and heat almost to boiling. Remove the grains, and add the malt syrup and boiling hops. Boil for one hour and add the aroma hops during the last 2 minutes of boiling.

Transfer the wort to the fermenter and add cold or chilled water to make 5 gallons and reach a temperature below 80 degrees F. Prime and bottle when all signs of ferment have stopped.

"Transpontine Treat"
Terry Foster

Amber malt extract, with its slightly fuller flavor than the pale variety, makes a good jumping-off point for this basically malty-sweet beer. A fair amount of crystal malt is added to improve texture and add a good caramel flavor. But it is the chocolate malt that really enhances the flavor of this brew. This roasted malt adds a chewy, nutty, non-bitter flavor, as well as providing the color needed in this style. Commercial British Brown Ales are often colored with licorice, but I find the chocolate malt has a far superior effect on flavor. Fuggles are a traditional brown ale hop, and suit perfectly with their low alpha-acid content, because hop bitterness should be merely detectable in this type of beer. The addition of just a little salt helps to round out the malt flavors and make the beer smoother.

This is a dark but translucent beer; light, but fairly malty with a pleasant nutty background. Its lightness, coupled with a relatively low carbonation level, makes it perfect as a "session" beer.

Recipe for 5 gallons

5 lbs. amber malt extract syrup
½ lb. crushed crystal malt
6 oz. crushed chocolate malt
2 oz. Fuggles hops for bittering
½ tsp. salt (non-iodized)
2 pkts. ale yeast
½ C. corn sugar for priming
Original gravity: 1.037 to 1.039
Terminal gravity: 1.006 to 1.009

Mix extract and grains and salt with 2 gallons of water. Bring this to a boil and strain out the grains; add the bittering hops and boil for one hour. Strain out the hops and add the wort to cold water to make 5 gallons.

Pitch the yeast and ferment out at 60 to 70 degrees F. Prime and drink as soon as the beer is conditioned. This beer should be drunk at 50 to 55 degrees F; i.e., cool, not chilled.

"Düsseldorf Alt"
Fred Eckhardt

This is a recipe developed for the Mid-Atlantic States Homebrewers Conference, September 1985, based on Kurt Widmer's Portland microbrewed Widmer Alt.

Recipe for 5 gallons

3.3 lbs. German malt extract
1 lb. crushed dark caramel (crystal) malt, 40 Lovibond color
¼ C. crushed dark roasted barley
1.8 oz. Perle or Northern Brewer hops (10 percent alpha acid) for bittering
1.2 oz. Tettnanger or Hallertauer hops (4 percent alpha acid) for aroma. Use loose hops if possible.
A top-fermenting Alt yeast if possible, otherwise 2 pkts. EDME ale yeast
Dry malt extract for bottling
Original gravity: 1.047
Terminal gravity: 1.010
Alcohol content: 3.9 percent by weight, 4.9 by volume

Place the caramel malt in a nylon bag in the pot with 2 gallons of water and bring it to a boil. When the water is near boiling remove the bag of grains, squeezing as much fluid from it as you can. Bring it to a boil and add the extract. Fifteen minutes after the actual start of the boil, add half the bittering hops. One hour later, add the rest of the bittering hops, then add the roasted barley. After 15 minutes more of boil add the aromatic hops, remove from the heat and let stand for 30 minutes.

Sparge and add to cold water to make 5 gallons. Add yeast at 65 to 70 degrees F and ferment at 50 to 60 degrees, the cooler the better. When fermentation is complete, rack the beer and age as a lager for 2 weeks at 32 degrees F. You may need to add some lager yeast at bottling.

PORTER

When treading London's well-known ground,
If e'er I feel my spirits tire,
I haul my sail, look up around
In search of Whitbread's best entire.
I spy the name of Calvert,
Of Curtis, Cox, and Co.;
I give a cheer and bawl for 't,
'A pot of porter, ho!

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Again, I hope, before I die,
Of England's can the taste to try;
For many a league I'd go about
To take a draught of Gifford's stout
I spy the name of Truman,
Of Maddox, Meux, and Co.;
The sight makes me a new man,
'A pot of porter, ho!'

"A Pot Of Porter, Ho!," circa 1800

The original Porter is traced to 1722 when a suburban London brewer offered a beer that claimed to combine the merits of the entire range of popular London ales of the day. This, he called "Entire," but the style (for reasons lost in myth) became famous under the name Porter. It was the first beer style to gain popularity throughout England and Ireland, and many of today's brewing giants (notably Whitbread, Charrington, and Guinness) built their fortunes on its success. Its popularity eventually gave way to Burton Ale in England, and Dublin Stout in Ireland, and by 1973 was declared extinct in England. But the British Empire was built during Porter's reign, and you can still find good examples brewed all over the world. It's now experiencing a modest revival with a few British breweries.

As the predecessor to Stout, it is easy to describe Porter by contrasting it to the famous Irish brew. Although Porter is a very dark beer, it is not opaque, like Stout. If you hold it up to the light it should be easy to see a deep red hue. Although it is generously hopped, it should be considerably to the malty side of Stout, with just enough black malt to give it a hint of roasted flavor. The alcohol strength should be sturdy, but not overly powerful, say 6 percent by volume. This places Porter neatly between the bitter stout and the sweeter Strong Ales—a well-balanced dark ale in every regard.

Tasting References:

Samuel Smith's Taddy Porter or Anchor Steam's Anchor Porter.

"Toluene Porter" Russ Schehrer

The original, a printed recipe at my local homebrew shop, was supposed to be like an Anchor Porter. Sounded like a good idea to me, since I wasn't too sure what a porter was and needed a new beer in the fall of 1983. During the cooling process I dropped my thermometer into the carboy and it broke. What a smell! After resisting the temptation to throw the whole lot out in the yard I called the manufacturer and found out that the component was toluene and that it would evaporate at room temperature (no problem at 130 degrees F then). The yeast took well and it turned out well. That batch won first in 1984 while another took Best of Show in 1985. I have stuck to the Cascade ratios since I've had nothing but good success. I usually dry hop for the finish although I have done a last-minute boil finish.

Recipe for 5 gallons

6.5 lbs. dried dark malt extract
1½ lbs. crushed crystal malt
½ lb. crushed black patent malt

1½ oz. Cascade hops for boiling
½ oz. Cascade hops for finishing
0 to 4 tsp. gypsum (as needed)
Pinch of Irish moss
EDME ale yeast
¾ C. corn sugar to prime
Original gravity: 1.050 to 1.054
Terminal gravity: 1.011 to 1.022

Add the grains to 1½ gallons of cold water and bring to a boil. Strain the grains, add the malt extract and gypsum and return to a boil. Add the bittering hops and continue to boil for 1 hour, adding the Irish moss for the last 5 minutes. Add the finishing hops for the last minute of the boil or dry hop in your fermenter. Sparge into the fermenter with cold water to make 5 gallons.

Pitch yeast and ferment at 60 degrees; bottle when fermentation is complete.

"Ted's Porter No. 2" Ted Whippie

A simple brew to make and also one of the Underground Brewers' favorites is my Porter No. 2. In this porter the use of a small amount of crushed black patent boiled with the dark malt extract produced a very good moderately-flavored porter. It will not "blow your head off," but you will be able to "drink more than one!" There seems to be no harshness from boiling the black patent—maybe there is enough other flavor to cover it up. But not having to steep the malt separately does keep it simple and you can use less.

Recipe for 5 gallons

6.6 lbs. English unhopped dark malt extract
3 oz. lightly crushed black patent malt
1 tsp. water crystals if water is soft
1½ oz. Bullion hops for boiling (11.5 HBU)
1 tsp. Irish moss
½ oz. Bullion hops for finishing
2 pkts. EDME ale yeast
¾ C. corn sugar for priming
Original gravity: 1.045

Add water crystals to 2 gallons of boiling water; remove from heat and add extract and black malt and mix well before returning to heat. Return to a boil and add one half of the boiling hops; after 30 minutes add the rest of the boiling hops and continue boiling for 30 minutes more, adding the Irish moss for the last 15 minutes. At the end of the boil remove from heat, add the finishing hops and let the wort settle for 30 minutes. Sparge into cold water to make 5 gallons.

Force cool if necessary and add yeast at 75 degrees F. Bottle when fermentation is complete.

"Essential Porter" Nancy Vineyard

A rich and creamy ale, the Essential Porter has nothing bitter to overwhelm the palate. Much of the expected roasted character is actually hidden by the crystal

malt sweetness and the smooth, well-rounded flavors from the Nugget hops.

Recipe for 5 gallons

5 lbs. dark dry malt
2 lbs. cracked crystal malt
¼ lb. cracked black patent malt
¼ lb. cracked wheat malt
4 oz. 100 percent dextrin
¾ oz. Nugget hops, first bittering addition
1 oz. Nugget hops, second bittering addition
2 oz. Hallertauer hop pellets for aroma
11½ gm. EDME ale yeast
¾ C. corn sugar for bottling

Heat one gallon of water to a boil, stir in the cracked malts and turn off the heat. Add one gallon hot tap water and cover the pot, leave to steep for 30 minutes. Strain the malt through a colander, collecting the runoff into your boiling kettle. If your kettle can hold more water, rinse the malts with hot tap water, one or so gallons, then discard the spent grains. Stir in the dark dry malt and the dextrin, bring to a boil, stirring to prevent boilover. Add the first bittering hops and boil for 30 minutes. Add the second bittering hops and boil for 35 minutes. Turn off the heat and add the aromatic hops. Cover and cool the wort in a water bath, then pour into the fermenter, adding the rest of the cold water and the yeast. Ferment in a dark place.

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"Pearly King Porter" Terry Foster

This is a dark, strong beer, so a good amount of dark extract makes a suitable base. The crystal malt adds a redness to the color, and mouthfeel and nuttiness to the flavor. Black and chocolate malts add further color, along with a dry, astringent tang. The two dark grains are mixed, because the smoother flavor of the chocolate moderates the harshness from the black. The beer has a good hop bitterness, provided by the high alpha-acid (about 10 percent) Northern Brewer hop. The newer variety, Eroica, is used for aroma, giving a full, pungent flavor, which nicely adds to the complexity of this beer.

Overall, this porter has a deep, red-brown, translucent color. It has lots of malty body, which is enhanced by the relatively low carbonation. The body is balanced by the clean hop bitterness, which dominates, but does not hide the rather coarser bitterness from the dark malts.

Recipe for 5 gallons

6 lbs. dark dry malt extract
2 lbs. crushed crystal malt
4 oz. crushed chocolate malt
4 oz. crushed black malt
1½ oz. Northern Brewer hops for bittering
½ oz. Eroica hops for aroma
2 pkts. ale yeast or liquid Guinness culture
½ C. corn sugar for priming
Original gravity: 1.058 to 1.062
Terminal gravity: 1.014 to 1.018

Mix the extract and grains with 2 gallons of water. Bring this to a boil and strain out the grains; add the

bittering hops and boil for one hour, adding the aroma hops for the last 5 minutes of the boil. If your brewing water is very soft, add ½ tsp. gypsum and ½ tsp. precipitated chalk at the start of boil. At the end of the boil, let the wort cool for 5 to 10 minutes, strain out the hops and add wort to cold water to make 5 gallons.

Pitch the yeast directly if dried, or as a starter if using a liquid culture. Ferment out at 60 to 70 degrees, prime and bottle. This beer will be ready after 3 to 4 weeks, but will be better kept for at least 2 to 3 months and should be drunk cool, but not chilled.

STOUT

No major beer style is as closely associated with a single brewery as Stout is with Dublin's Guinness brewery. Guinness had enormous success with Porter, and had already conquered the Irish market before it introduced Extra Stout Porter in the late 1700s. Whereas the word "stout" was originally intended to mean "strong," it has since come to refer to the very black color and heavily roasted flavor.

One key to Guinness' continued success is its universal availability. None of the British brewers consider it to be competition, so they allow it into their tied-house pubs as their token dry stout, and offer a much sweeter black brew as the British version of Stout.

Since one brewery dominates the style, there would seem to be agreement on its characteristics. But even within Guinness' product line there is a bewildering range of brews. The draft version, like its Bitter-Pale Ale counterparts, is considerably milder in strength and carbonation than the bottled "Extra Stout." Then there is the bottle-conditioned Guinness available in England and a strong "Foreign Extra Stout" brewed in subsidiary breweries all over the world.

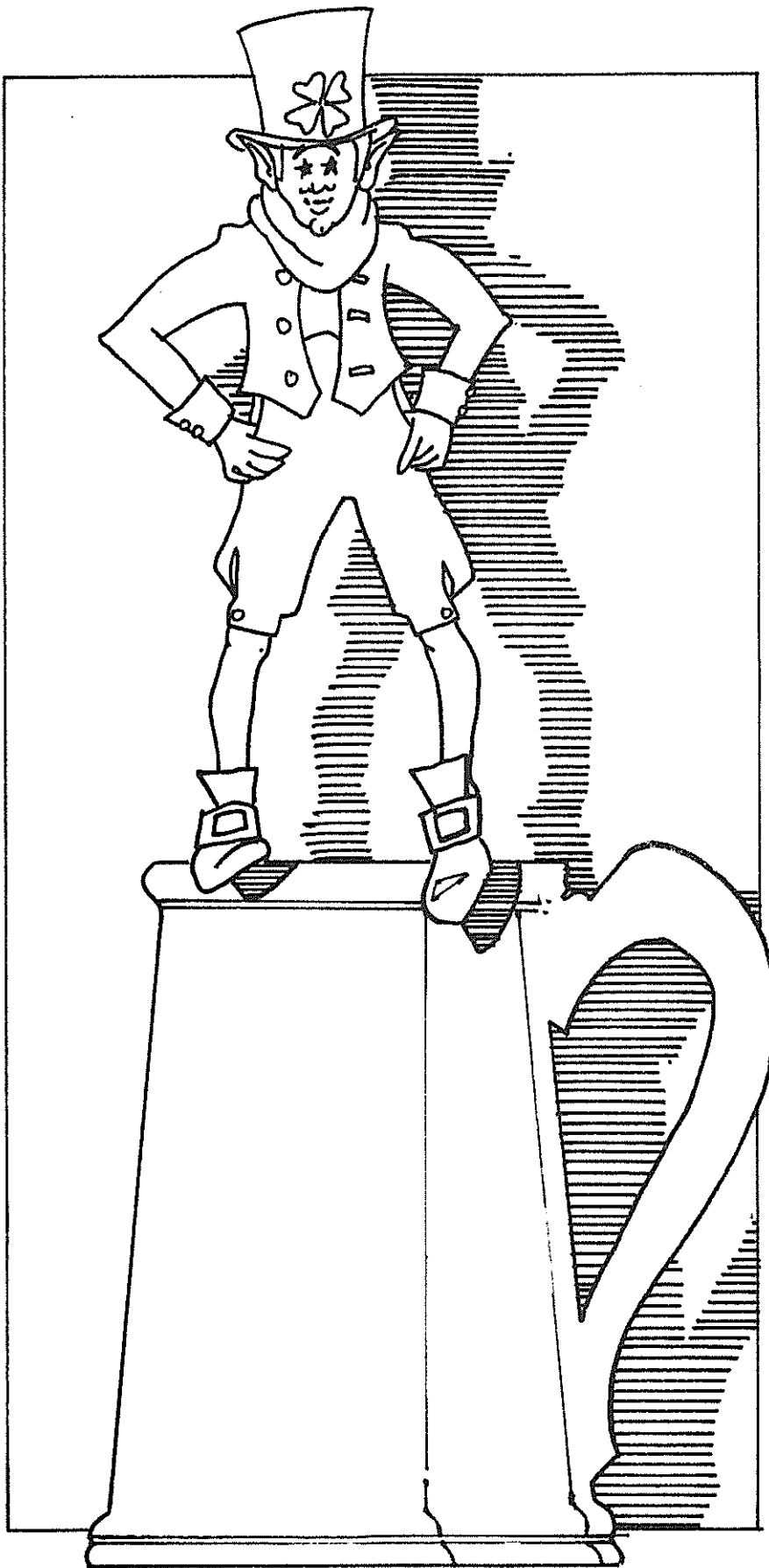
In essence, a good Dublin Stout should not be particularly strong in alcohol, as is often assumed by the frightened modern American consumer. Quite the contrary, it should be the type of beer you can easily drink by the pint. Its primary flavors come from the use of roasted unmalted barley and black malt, along with generous doses of bittering hops, but never in such high proportions that they obliterate the nice ale yeast flavors that result from top fermentation and cellar temperature conditioning.

Tasting References:

Dry Stout (Dublin Stout); Draft Guinness and Guinness Extra Stout; Sweet Stout (London Stout); Mackeson XXX

"Fooled 'Em Again Dry Stout" Byron Burch

This is an adaptation of an excellent porter recipe that has been upgraded (or downgraded, if you prefer) into a most drinkable dry stout. Eroica and Cascade hops contribute a delicacy of hop flavors while Nugget and Willamette add an assertive spiciness. These yeasts will help get the most character from your hops. The black grains send two different kinds of roasted character dancing around your mouth; crystal malt contributes an overtone of caramel sweetness, and mild ale malt contributes



the fresh grain aromatic so essential to most beers. The fooler is the dextrin, which takes an otherwise austere and somewhat assertive brew and lends a remarkable smoothness and subtlety to the whole.

Recipe for 5 gallons

5 lbs. British dark dry malt extract
 2 lbs. crushed crystal malt
 1½ lbs. crushed mild ale malt
 12 oz. chocolate malt, whole
 4 oz. roasted barley, whole
 6 oz. 100 percent dextrin powder
 ½ oz. Eroica pellets and ¼ oz. Nugget pellets, first bittering addition
 ¾ oz. Nugget pellets, second bittering addition
 1 oz. Cascade pellets and 1 oz. Willamette pellets for aroma
 14 gm. EDME or Muntona ale yeast

Tie the crystal and mild ale malts loosely in cheesecloth or a muslin bag. Heat a gallon of water to approximately 165 degrees F, turn off the heat and add the grain, letting it steep for an hour. Remove your "tea bag" of grain and wring it out, collecting the water in the boiling kettle. Pour the rest of the steeping water into the kettle as well. Add the dry malt, dextrin powder and as much water as your boiling kettle can hold and still allow foaming in the head space. Bring the kettle to a boil and add the first bittering hops, stirring to prevent boilover. Boil for 30 minutes and add the second bittering hops (along with the chocolate malt and roasted barley tied up in cheesecloth). Boil for 30 more minutes. Turn off the heat, cover and cool in a water bath. Pour into a fermenter with the rest of the water and add the yeast and aromatic hops. Cover and ferment in a dark, cool place.

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"Kansas City Bier Meister Stout"

Kansas City Bier Meisters

This stout is a full-bodied, mildly-carbonated brew with a rich brown head. It is characterized by a malty flavor with delicate hop balance.

To fortify the light-bodied character of the Laaglander Irish Stout, the John Bull dark malt extract and the spray-dried malt are added. The roasted barley is used to give the beer the characteristic stout aroma and flavor. Not only does chocolate malt impart flavor and aroma, but it adds a roundness to the flavor. A "little bit of bite" and color are added by the black patent malt.

The sharp bitterness of the Bullion hop offsets the sweetness contributed by the crystal malt. The Fuggle hops were staged; in the boil for flavor and bitterness and in the finish for a soft hop aroma.

Recipe for 5 gallons

3.3 lbs. Laaglander Irish Stout extract
3.3 lbs. John Bull dark malt extract
2 lbs. spray-dried dark malt
2 lbs. crushed crystal malt
¼ lb. whole roasted barley
¼ lb. whole chocolate malt
1 Tbs. whole black patent malt
1 oz. Bullion leaf hops and ½ oz. Fuggle leaf hops for bittering
½ oz. Fuggle leaf hops for finishing
½ tsp. gelatin finings
1 pkt. EDME ale yeast
¾ C. corn sugar for priming
Original gravity: 1.068
Terminal gravity: 1.019

Add the grains to one-half gallon water at 155 degrees F and hold at that temperature for one hour. Strain and rinse the grains and mix this liquid with the extracts and as much water as your pot will allow without boiling over. Bring this to a boil, add the bittering hops and boil for 45 minutes. Remove from the heat and add the finishing hops. Cool the wort for 30 minutes, strain out the hops and add to cold water to make 5 gallons. Add the yeast when the temperature is at 70 to 75 degrees F.

After 3 days of fermentation dissolve the gelatin finings in a small amount of cool water and allow to stand for one-half hour. Bring this mixture to a boil and add it to the beer.

Bottle when fermentation is complete and allow 3 weeks for conditioning, but it will continue to improve for several months.

"Park Royal Peril"

Terry Foster

Dark malt extract forms a most suitable base for this malty beer, with extra body being added from the fairly large amount of crystal malt. Much of the bitter, astringent flavor comes from the use of a high proportion of roasted barley, along with a little black malt to enhance the inherent harshness of the brew. A fairly high hop bitterness also is necessary to offset the maltiness, and this is given by the high alpha-acid hop, Northern Brewer, a traditional favorite for this beer. The use of a Guinness culture yeast seems to result in a better blending of the

malt and hop bitterness than does a standard dried yeast. In fact, the yeast and the use of roasted barley as the predominant dark malt are the keys to successful brewing of this black, dry, bitter, yet full-bodied classical beer style. Note that, unlike porter, the bitterness in stout is dominated by the roasted malts, rather than by the hops.

Recipe for 5 gallons

5 lbs. dark dry malt extract
1 lb. crushed crystal malt
1½ lb. crushed roasted barley
4 oz. crushed black malt
2 oz. Northern Brewer hops for bittering
Liquid Guinness yeast culture
¾ C. corn sugar as priming
Original gravity: 1.050 to 1.054
Terminal gravity: 1.010 to 1.012

Mix extract and grains with 2 gallons of water. Bring this to a boil and strain out the grains; add the bittering hops and boil for one hour. At the end of the boil strain out the hops and add the wort to cold water to make 5 gallons.

Pitch the yeast culture as a starter and ferment out at 60 to 70 degrees F. Prime and age for at least 2 to 3 weeks; it will be at its best from 4 to 6 weeks and should be drunk cool but not chilled.

"Choc-o-lot Mousse"

Nancy Vineyard

Dark malt syrups contain a great deal of roasted malts for dark color and for rich malted-bitter flavors. Playing off this rich base, Northern Brewer hops contribute minty, spicy peaks of flavor that assuage the malt bitterness. Very little priming sugar is needed for this beer, as it typically continues to create CO₂ from the complex sugars of the dark extract syrup during storage.

Recipe for 5 gallons

7 lbs. dark malt extract
3 oz. Northern Brewer hops for bittering
2 oz. Willamette hops for aroma
11½ gm. EDME ale yeast
½ C. corn sugar for priming (or save ¾ C. extract)

Mix the extract into several gallons of water in the boiling pot and bring to a boil. Add ½ the bittering hops and boil for 40 minutes. Add the rest of the bittering hops and boil for 20 minutes. Turn off the heat and add the aromatic hops, cover and cool the wort. Pour the wort into the fermenter with water to make 5 gallons and add the yeast. Ferment in a dark place.

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"Baculum Ale"

Russ Schehrer

My success with stouts has been less than eventful. I've got one that reminds me of asphalt, another of a porter, another of too much licorice. When I saw this kit, I decided to give it a try; I had never tried a kit before. I varied the instruction by making it all malt and adding some finish hops. The results were very good, not a stout

as in Guinness, but a stout and very palatable. A baculum is the penis bone present in certain mammals, such as the whale.

Recipe for 5 gallons

7 lbs. EDME Irish Type Stout Superbrew Kit

1 oz. Northern Brewer hops for finishing

1½ tsp. gypsum

Pinch of Irish moss

Yeast supplied with kit

¾ C. corn sugar for priming

Original gravity: 1.045

Add the extract and gypsum to 1½ gallons of boiling water and continue boil for 30 minutes, adding the Irish moss and finishing hops for the last 5 minutes of the boil.

Sparge into cold water to make 5 gallons, pitch the yeast and bottle when fermentation is complete.

STRONG ALES

Strong Ales are the opposite of the American thirst-quencher beers. These are beers to spend time with, beers to soothe the weary soul. People who turn to distilled spirits and liqueurs for after-dinner drinks and bedtime nightcaps rob themselves of the healthful and sustaining attributes offered by a good hearty ale.

There is no one style of strong ale. The more profound the flavors in a beer, the wider the possibilities for variation and the slower you drink them, the more time you have for exploration of detail.

The range starts with the British "Old Ales" and "Scots Ales," which may run as low as 6 percent alcohol by volume, or as high as 9 percent. Holding the middle ground are the individualistic Belgian ales, no two of which are alike, but range from 6 percent to 12 percent, and from quite pale to a dark copper. The strongest ales are popularly referred to as "Barleywine" and "Imperial" or "Russian" Stout. These ales combine extraordinary strength and vigorous hopping rates to deliver a very intense brew that mellows with extended bottle aging.

Tasting References:

Old Ale: Theakston's Old Peculier.

Scots Ale: McEwan's Scotch Ale.

Belgian Trappists: Orval (under 6 percent, pale amber); Chimay Red (6.6 percent, copper); Chimay Blue (8.75 percent, dark).

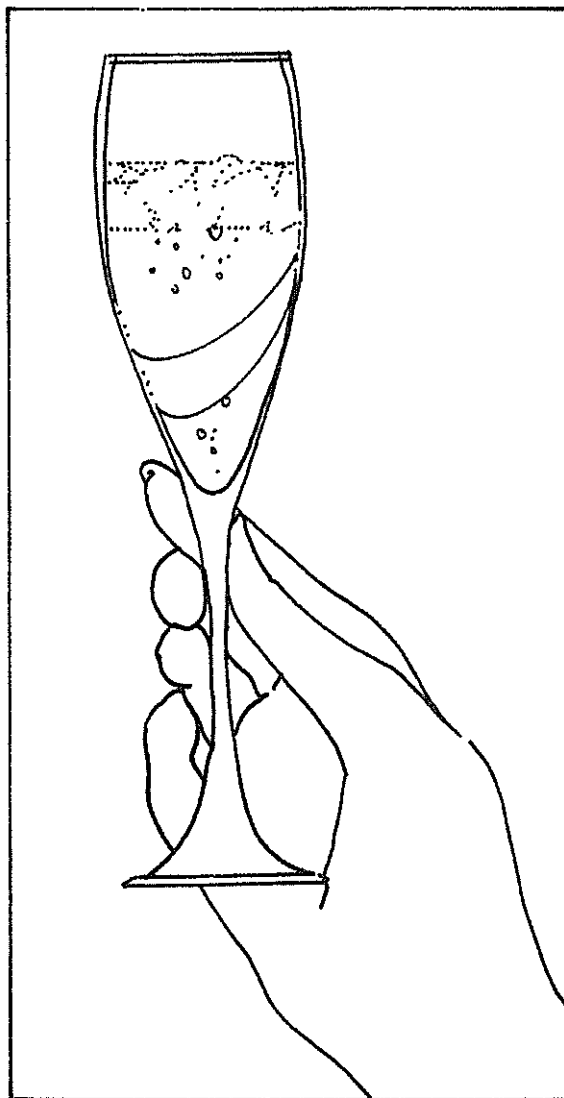
Belgian Specialties: Duvel (8.2 percent, very pale); Affligem (9 percent, pale amber); Kwak (9.5 percent dark).

Barleywine: Anchor Old Foghorn.

Imperial Stout: Koff Stout (Finland); Courage's Russian Imperial Stout.

"Peculiar Old Ale" Terry Foster

I was reluctant to give a kit recipe, because too many of these rely on large amounts of added sugar, resulting in thin, disappointing beers. That this recipe is similar to one published by Charlie Papazian in *The Joy of Home Brewing* is something for which I will not apologize, since this Old Ale kit is most definitely a cut above the rest. The beer has a good copper color, darker than that of a bitter. It is definitely, though not overpoweringly malty,



with a distinct hop bitterness. It is an enjoyable drink with distinct character and is certainly comparable in quality to the few remaining commercial examples of Old Ales brewed in Britain, which are really just strong mild ales. Try it as a one-to-one mixture with British Bitter, a drink known as "Mother-in-Law" because she's "Old and Bitter!"

Recipe for 5 gallons

6.6 lbs. Munton and Fison Old Ale Kit extract

Yeast supplied with the kits

½ C. corn sugar for priming

Original gravity: 1.046 to 1.048

Terminal gravity: 1.010 to 1.012

Add the extract to 2 gallons of boiling water. For this beer it is only necessary to boil the wort for 15 to 20 minutes. Add the wort to cold water in your fermenter to make 5 gallons, pitch the yeast and ferment out at 60 to 70 degrees F. Prime and let it age for at least 3 to 4 weeks; it will improve if it's kept longer. Drink it at 50 to 55 degrees, i.e. cool, not chilled.

"Munton and Fison 'Old Ale' Kit" **Ted Whippie**

Without question the best and also the easiest kit of my experience is the "Old Ale" by Munton and Fison. This kit makes a small batch (only 18 12-ounce bottles) of an all-malt strong ale. Just follow the instructions on the can exactly. There are some real surprises there! The malt extract is diluted with water with no boiling, no sugar is added and after primary fermentation the ale is bottled with no priming sugar. As they should be, cleanliness and sterilization are emphasized.

In this kit the 3.3 pounds of hopped malt extract is diluted with only a little over 1½ gallons of water, which makes a real potent beer. The recommended conditioning period of four weeks is a real minimum. It seems to keep getting better as time goes by. Maybe one should make two batches at a time so that it will last!

Original gravity: 1.068

"Elephant Malt Liquor" **Laaglander Light Kit** **Gary Bauer**

In many American states and some foreign countries, it is not lawful to call a brew "beer" or "ale" if it exceeds a certain strength; therefore, the term malt liquor has come into existence to satisfy labeling laws. Malt liquor is higher in alcohol and fermented at warmer temperatures than typical for lagers. Alcohol content is usually 5.5 percent to 7.5 percent and the body should be medium to medium-full, preferably with a malty aroma.

Recipe for 5 gallons
6.6 lbs. Laaglander light malt extract kits
2 lbs. corn sugar
4 oz. malto-dextrine
¼ oz. Cascade hops for aroma
Yeast included with kits
¾ C. corn sugar for priming
Original gravity: 1.060

Boil 1½ gallons of water; add the extract, corn sugar and malto-dextrine and boil for 30 minutes. Add the aroma hops for the last 5 minutes of the boil. Sparge and add wort to cold water to make 5 gallons.

Pitch yeast and ferment at 54 to 57 degrees F until done. Prime and condition for 3 weeks at 40 to 50 degrees and age for 3 weeks more.

"Take No Prisoners Barley Wine" **Byron Burch**

This is a brew that takes command early and keeps it. With plenty of malt sweetness and hop bitterness blending together as aging time goes by, it produces something akin to an all-out assault on your taste buds. A wine yeast is used because it has a higher alcohol tolerance. This type of beer is for after-dinner sipping. The temptation, however, is to have too many in a row. This could make it as hard for you to stand as it was for Custer. Treat it with respect.

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Recipe for 5 gallons
12 lbs. dry amber malt extract
¼ lb. dry dark malt extract
8 oz. 100 percent dextrin powder
2¼ oz. Northern Brewer pellets and ¼ oz. Eroica pellets, first bittering addition
2 oz. Nugget pellets, second bittering addition
3 oz. Cascade pellets for aroma
10 gm. Pasteur Champagne wine yeast
¾ C. corn sugar for priming

Dissolve all the dry malt and dextrin powder in 4 gallons of water and heat to boiling. Add the first bittering hops, stirring to prevent boilover. Boil 30 minutes, and add the second bittering hops. Boil for 30 more minutes. Turn off the heat, cover and cool in a water bath. Pour into a fermenter with water to make 5 gallons and add the yeast and aromatic hops. Cover and ferment in a dark, cool place. Age for at least six months in the bottle.

"Barleywine Style Strong Ale" **Fred Eckhardt**

Based on the Queen's Jubilee Ale in *Amateur Brewer* No. 3, 1977.

Recipe for 5 gallons
3.3 lbs. light malt extract
3.3 lbs. amber malt extract
3.3 lbs. dark malt extract
3 lbs. crushed caramel (crystal) malt, 40-Lovibond color
3 oz. Eroica (or Comet) (10 percent alpha acid) or substitute 2½ oz. Galena hops, for bittering
1 oz. Fuggles or substitute Cascades (5 percent alpha acid) for aroma
Optional water treatment: 1 tsp. gypsum and 1/8 tsp. Epsom salts for medium hard water, double for soft water
2 or 3 pkts. EDME ale yeast
Dry malt extract for priming
Original gravity: 1.087
Terminal gravity: 1.022
Alcohol content: 6.9 percent by weight, 8.8 by volume

Place the crystal malt in a nylon bag with 2 gallons of cold water in your pot and bring to a boil. When near boil remove the bag of grains, squeezing as much liquid from it as you can, dissolve the malt extract and water treatment and bring to a boil. After 15 minutes of boil add one-half the bittering hops; after 30 minutes more add the rest of the bittering hops and continue the boil for 30 minutes. Add the aromatic hops and remove from the heat; let the wort settle for 30 minutes. Sparge into your fermenter with cold water to make 5 gallons.

Pitch the yeast at 65 to 70 degrees F and ferment at 50 to 60 degrees. After ferment has finished, rack the ale and age at 65 degrees for 2 weeks, then bottle-age for 3 to 6 months or longer.

"Spoonstander Imperial Stout" **Byron Burch**

If you're a brewer looking for more head, this is the beer for you. I've seen two or three inches of the richest,

creamiest head imaginable form when a pitcher of this stuff is poured, staying for 30 minutes or so, even after the beer is gone. All of the exceedingly complex roasted malt and bitter hop flavors are present in substantial amounts, suitable for the respectable alcohol content, creating a remarkable balance at an unusual level of intensity. Fresh and robust at first, this stout will take on a rich mellowness as the months go by.

Recipe for 5 gallons

5 lbs. British extra dark dry malt extract
 3.3 lbs. British dark malt extract
 8 oz. crushed black patent malt
 5 lbs. white rice syrup
 1 lb. corn sugar
 5 oz. lactose
 2¼ oz. Northern Brewer pellets and ¼ oz. Cluster pellets, first bittering addition
 1¼ oz. Nugget pellets and ¼ oz. Eroica pellets, second bittering addition
 2 oz. Cascade pellets and ¼ oz. Saaz pellets for aroma
 10 gm. Pasteur Champagne wine yeast
 ¾ C. corn sugar for priming

Dissolve all the dry malt, malt extract, rice syrup and corn sugar in 5 gallons of water and heat to boiling. Add the first bittering hops, stirring to prevent boilover. Boil 30 minutes, and add the second bittering hops, along with the black patent malt (tied in cheesecloth). Boil for 30 minutes more. Turn off the heat, cover and cool in a water bath. Pour into a fermenter and add the aromatic hops. Cover and ferment in a dark, cool place. Age at least three months in the bottle.

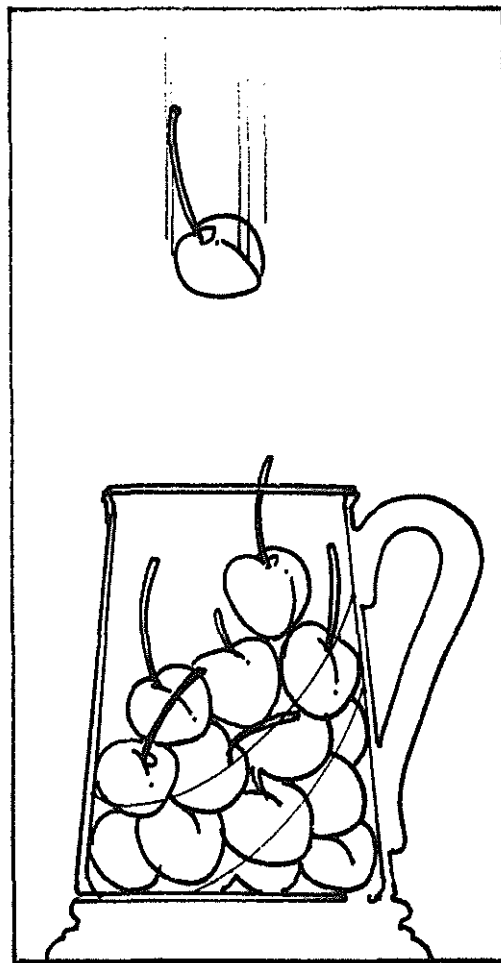
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SPECIALTY BEERS

These are the beers classified in the "It Takes All Kinds" category. Actually the world's most unusual beers are not the product of some crazed brewer's vivid imagination, but are the leftovers from the ancient days before brewers understood fermentation, or even before the discovery of the benefits of hops. Now that modern techniques have taken most of the mystery out of brewing, some brewers decide they still like the way the old beer tastes, and continue to allow the old flavors into the beer.

LAMBIC

One style experiencing a revival of popularity is the Lambic family of wheat beers brewed in a tiny area on the south fringe of Brussels, Belgium. Sometimes called "wild" or "spontaneously fermenting" beers, Lambics are fermented by a natural microorganism present in the air. While this practice would give a modern brewer nightmares, many people like the sour and fruity flavors that result. The initial Lambic fermentation is only the beginning. The art comes in the aging and blending. Aging for two summers mellows the beer considerably. "Gueuze" is a blend of old and young lambic that is then aged another year in the bottle. "Kriek" is a popular variation where black cherries are macerated in young lambic for several months and then bottle-aged for up to three more years, slowly maturing from a strongly-flavored cherry beer to a wonderful blend of the sweet and sour influences.



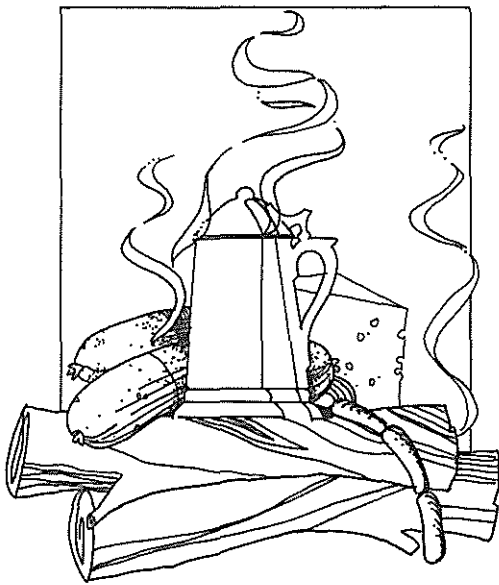
WHITE BEERS

Another ancient Belgian wheat beer style is the "White" beer found in Hoegaarden. It's brewed in proportions of 40 percent wheat, 10 percent oatmeal, 50 percent barley malt and hopped with an unusual blend of British and Czech hops. But even stranger, the aroma is spiced with a touch of coriander and Curaçao. Bottle conditioning and aging completes one of the world's true brewing delicacies.

Another wheat beer with the nickname "white" is found in Berlin. This refreshment specialty is brewed to a very low gravity, then a lactic-acid fermentation is induced by the addition of a sour-milk culture. Why anyone would go out of their way to brew a sour beer would seem a baffling question, until you try the beer with the traditional dash of raspberry syrup or essence of woodruff. The combination of sweet and sour in a light, low-alcohol beer becomes perhaps the most refreshing of all the world's brews.

RAUCHBIER (smoked)

One of the world's all-but-forgotten traditions is the smoking of malt over a wood flame. The city of Bamberg, in Bavaria, seems to be the last place to appreciate what



this process can do for the flavor of beer. The smoke from moist beechwood permeates the malt and thus the beer, creating one of the best beers imaginable to accompany German cheeses and sausages.

Tasting References:

Mort Subite Kriek Lambic; Hoegaarden White; Berliner Kindl Weisse; Kaiserdom Rauchbier.

"First Time Cherry Ale" Byron Burch

If you've been fascinated by Belgian Kriek Lambic beers, and would like to try making one, here's a good, though easy, recipe suitable for your first effort. With its unusual flavor profile combining malt, hops and cherry, accentuated by a unique yeast, this brew yields a memorable complexity you may find addictive. No matter how many kinds of beer you enjoy in your lifetime, you never forget your first cherry.

Recipe for 5 gallons

7 lbs. light malt extract
2 lbs. amber dry malt
4 oz. 100 percent dextrin powder
1 gallon bottled cherry juice or cherry cider
1/3 oz. Nugget pellets, first bittering addition
1/8 oz. Nugget pellets and 1/8 oz. Willamette pellets, second bittering addition
1/4 oz. Willamette pellets and 1/4 oz. Cascade pellets for aroma
Yeast starter made with yeast cultured from a bottle of Chimay
3/4 C. corn sugar for priming

Dissolve the malt extract, dry malt and dextrin powder in as much water as your boiling kettle can hold and still allow room for foaming in the head space. Bring the kettle to a boil and add the first bittering hops, stirring to prevent boilover. Boil for 30 minutes and add the

second bittering hops. Boil for 30 minutes more. Turn off the heat and add the cherry juice, aromatic hops, water to make 5 gallons and the yeast starter. Cover and ferment in a dark, cool place.

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"Cherry Pils" Gary Bauer

Recipe for 5 gallons

6 lbs. dry light malt extract
46 oz. pure cherry juice (no preservatives)
1 oz. Saaz hops for bittering
1/2 oz. Saaz hops for flavor and aroma
2 pkts. Red Star lager yeast
3/4 C. corn sugar for priming
Original gravity: 1.045

Add the malt extract and bittering hops to 1 1/2 gallons of boiling water and boil for 30 minutes. Add the flavor and aroma hops and continue the boil for 20 minutes more. Strain hops and add wort to cold water to make 4 3/4 gallons. Add the cherry juice to the cooled wort.

Pitch the yeast and ferment at 60 degrees F until done. Prime and condition for 3 weeks at 50 to 60 degrees before drinking.

"Framboise (Raspberry II)" Phil Schuchman of the Kansas City Bier Meisters

Framboise is a light-bodied, crisp beer. The unfermentable dextrins in the John Bull malt extract add body to the beer. Both the Burton water salts and the Adolph's meat tenderizer are used for the papain they contain. The key flavors of the beer are the hops and raspberries. Hallertau hops are used for their distinctive character in a lightly hopped beer. Loose-pack frozen raspberries are used because they contain less sugar than other frozen raspberries and the cost of fresh berries is too high.

Recipe for 5 gallons

3.3 lbs. John Bull light malt extract
4.2 lbs. light dry malt extract
1/4 pkt. Burton water salts
2 1/2 tsp. Adolph's 100 percent natural meat tenderizer
1 pkt. Vierka Hallertau hop pellets
1 tsp. Irish moss
3.3 lbs. loose-pack frozen raspberries
1 pkt. Vierka light lager yeast
1/2 tsp. organic yeast nutrient
1 tsp. gelatin
1/2 C. corn sugar to prime
Original gravity: 1.060
Terminal gravity: 1.022

Dissolve all malts and water treatments in two gallons of boiling water. Boil for one hour, adding hops and Irish moss during the last 20 minutes. Sparge and add to

raspberries (processed in a blender) in an insulated cooler. Let stand 30 minutes. Add water and ice (for a fast break) to make 5½ gallons. Rack after 1 week and add yeast nutrient. Fine with gelatin and top off after 2 weeks. Use double-stage fermentation in glass at 68 degrees F for 6 weeks.

"Marion Berry Ale" **Russ Schehrer**

This beer has been made with cherries (small, very sour pie cherries) and blackberries as well as marion berries; all have been wonderful. Laaglander dry extract is probably the best because of its light color (the berries show off their color with the lighter malt). This recipe was made once and the bottles were a little overcarbonated. No doubt I bottled a little early since the final gravity should have been a little lower given the ingredients and yeast used. The marion berries I used were a little too tart for plain snacks but made a wonderful pie, a good batch of mead and a great ale.

Recipe for 5 gallons

3.3 lbs. Munton and Fison light malt extract or 3 lbs. dry light malt extract
½ lb. corn sugar
2 oz. Bullion and ¼ oz. Cascade hops for bittering
½ oz. Tettnanger hops for finishing
Pinch of Irish moss
3 lbs. marion berries
Champagne yeast
¾ C. corn sugar to prime
Original gravity: 1.055
Terminal gravity: 1.014

Add the extract, corn sugar and bittering hops to 2 gallons of boiling water. Boil for 30 minutes, adding the Irish moss for the last five minutes. Remove from heat and add the hand-mashed berries and finishing hops to the pot and let them steep for 30 minutes. Without sparging, add the entire wort to cold water to make 5 gallons in a pail-style fermenter.

Pitch yeast and after 3 days rack to a carboy; bottle when fermentation is complete. Let this age in the bottle for at least a month.

"Spruce Beer" **Lois Canaday**

The spruce sprigs impart to this ale an aroma and flavor that seem even more delightful than that obtained from hops. Also, it tasted and smelled very satisfying after only one day in the bottle. We didn't even look to see that it was still cloudy.

It will be impossible to let this spruce ale sit in the bottle long enough to gain any age!

Recipe for 5 gallons

3½ lbs. EDME SFX extract
2 lbs. Munton and Fison dark dry extract
4 to 6 oz. of new growth spruce sprigs (stems, needles and all)
7 bittering units (HBU) of Cascade hops
1 pkt. Edme ale yeast
¾ C. corn sugar for bottling

Original gravity: 1.044

Terminal gravity: 1.011

Dissolve the malt extracts in one gallon of hot water, add boiling hops and spruce sprigs. Boil for one hour, stirring to turn under the floating needles. There is no need to add aroma hops, the spruce needles take care of that.

Transfer the wort to the fermenter and add cold water to make 5 gallons and reach a temperature below 80 degrees F. Add the yeast and ferment at 60 degrees F, if possible. Prime and bottle when all signs of ferment have stopped.

"California Steam Beer, Brew 61" **Fred Eckhardt**

Adopted from my 1971 recipe, this is a California Ale.

Recipe for 5 gallons

4 lbs. Alexander pale malt extract. (This brand is quite variable in strength. Shake the can; if it sloshes, find another, or speak to the management for an adjustment; however, the quality of the end product is usually worth the chance you take. If you are trying to make a genuine steam beer taste-alike, the malts used at Alexander's are very close to those used at Anchor.)
2½ lbs. pale dry malt extract, use the best
2 oz. Northern Brewer hops (can substitute Brewer's Gold) for bittering
½ oz. Northern Brewer hops for aroma
Use a good lager yeast; if Red Star use 3 pkts.
Dry malt extract for priming
Original gravity: 1.048 (depends on the Alexander's quality, which varies)
Terminal gravity: 1.011
Alcohol content: 3.9 percent by weight, 5 by volume

Bring 2 gallons of water to a boil, add the dry malt extract, mixing it well, then the Alexander extract syrup. Return to a boil and after 15 minutes add half the bittering hops. One-half hour later add the rest of the bittering hops and continue the boil for 30 minutes. Add the aromatic hops, remove from heat and let the wort settle for 30 minutes. Sparge into cold water to make 5 gallons.

Add the yeast at 65 to 70 degrees F and ferment at 50 to 60 degrees. When ferment has finished, rack and age in a carboy for 2 weeks longer at 55 degrees before bottling.

"Mast-and-Sail Progressive Steam Beer" **Byron Burch**

This is a rich, amber beer, with a touch of sweetness from the malt and dextrin powder punctuated by the mintlike assertiveness of Northern Brewer. The use of Red Star lager yeast and the addition of a full cup of corn sugar at bottling time moves this beer toward a crisp, dry finish, leaving lesser brews in its wake.

Recipe for 5 gallons

5 lbs. British amber dry malt extract
½ oz. 100 percent dextrin powder
1 tsp. gypsum
¼ tsp. salt

1 1/8 oz. Northern Brewer pellets, first bittering addition
 1 1/8 oz. Northern Brewer pellets, second bittering addition
 1/2 oz. Northern Brewer or Cascade pellets for aroma
 14 gm. Red Star lager yeast
 1 C. corn sugar to prime

Dissolve the dry malt, gypsum, salt and dextrin powder in as much water as your boiling kettle can hold and still allow room for foaming in the head space. Bring the kettle to a boil and add the first bittering hops, stirring to prevent boilover. Boil for 30 minutes and add the second bittering hops. Boil for 30 minutes more. Turn off the heat, cover and cool in a water bath. Pour into a fermenter with water to make 5 gallons, adding the yeast and aromatic hops. Cover and ferment in a cool dark place.

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MEAD

Mead is a fermented beverage unto itself. Neither a beer nor a wine, it is yeast-fermented honey water, probably one of the first fermented beverages concocted by man. Throughout the ancient civilizations we find that mead was a legendary and celebratory drink.

Traditionally mead has been brewed with the ratio of one gallon of water to three to five pounds of honey, resulting in a very slow fermentation and an extremely sweet beverage. The high sugar content of the wort will not fully ferment, because the higher alcohol levels inhibit the yeast fermentation.

Commercial mead is scarcely available, but as a homebrewer you can try what you like with fermenting honey. Contemporary mead, as many of us brew it, is dryer than the traditional beverage, and with conditioning it can be made sparkling, reminiscent of Champagne essence.

The possible variations are endless, as with all your homebrew endeavors, but the basic categories are these:

Traditional Mead—This is a basic mead brewed with honey and water in the proportions of two-and-a-half pounds honey per one gallon water.

Metheglin—A basic mead infused with herbs or spices (our beloved hops or ginger root or lemongrass are favorites).

Melomel—A mixture of fruit juices with honey. When that fruit is grapes it is called a **pymment**; apple juice and honey produce a **cyser**.

Berries of all sorts make for really fine mead flavors.

Brewing mead is simple, like beer, but requires patience for the slow fermentation and long aging process that mellows its flavor. We all know that time passes quickly, so why not let our mead age along with us and enjoy the maturity?

"Purple Haze Hendrix Mead" Charlie Papazian

I have had great meads and I have had great meads. This is one I have had time after time and its impressiveness never seems to diminish. A still mead, this brew is sweet yet mystically balanced with the purple essence of black raspberries. A small amount of tannin and acidity

in the fruit does a fantastic job of balancing this mead's sweetness without being assertive.

This is a winner, and while other fruits may be substituted (red raspberry, blueberry, cherry, etc.) there is no comparison to the quality of black raspberries. If you even think this sounds good, then you will absolutely fall in love with this mead.

Recipe for 5 gallons

14 lbs. very light clover honey
 10 lbs. black raspberries (fresh-crushed or frozen; not sweetened)
 5 tsp. yeast nutrient
 2 pkts. wine or sherry yeast
 Original gravity: 1.100 to 1.110

Dissolve the honey and yeast nutrient in 2 gallons of water and bring to a boil for 30 minutes. Add the crushed black raspberries to the boiling honey water and turn off the heat. Do not bring back to a boil, rather let the fruit steep at pasteurization temperatures of about 150 to 160 degrees F.

Add all of the sweet honey-fruit liquor to 3 gallons of cold water in your fermenter, which must be an open type such as a sanitized 6½- to 10-gallon plastic container. Top up your brew with cold water to make 6 gallons. Pitch a good strong yeast culture and let honey, water and fruit ferment for 5 to 6 days.

After the initial 5 to 6 days of fermentation transfer the fermenting mead to a secondary fermenter by first removing the fruit with a strainer (boil the strainer in water to sterilize). Then siphon into a secondary fermenter and attach fermentation lock.

Fermentation will proceed anywhere from one month to five months depending on the strain of yeast and its strength. Let fermentation proceed to completion.

Bottle without priming sugar. The mead is ready to drink immediately, though it will improve some with age.

"Sparkling Mead" Russ Schehrer

There have been countless versions of ginger mead. Most of them can be attributed to Charlie Papazian. Well, I have my own version. A few bottles remain from my first batch in 1982 and they are beautiful. I have made a couple more batches with the same success. The amount of ginger has gone down from 3 ounces to being an optional ingredient, along with the hops. Champagne yeast is desirable over beer yeast because of the character it imparts on mead, namely, a lower terminal gravity and lighter body. This recipe has been the basis for many meads including a whole world of berried meads (raspberry, black raspberry, blackberry, and marion berry). Yes Virginia, meads are an aphrodisiac.

Recipe for 5 gallons

6 lbs. light honey
 1/2 oz. or less fresh, grated ginger root
 2 lbs. corn sugar
 3/4 oz. Willamette hops for finishing
 Pinch of Irish moss
 2 tsp. yeast nutrient
 Champagne yeast
 3/4 C. corn sugar for priming

Original gravity: 1.065
Terminal gravity: 0.992 to 0.997

Dissolve the honey, corn sugar and yeast nutrient with ginger root in 2 gallons of water and bring to a boil for 30 minutes, adding the Irish moss for the last 5 minutes. Add the finishing hops and remove from the heat; let it settle for 10 minutes. Sparge into a fermenter with cold water to make 5 gallons and pitch the yeast.

Fermentation will proceed taking 1 to 5 months to be complete. Prime with corn sugar and bottle when fermentation is complete. Let this mead age, and age, for six months to a year or more.

MÄRZEN (or Vienna or Oktoberfest)

Of the brewers who first introduced bottom fermentation, perhaps the most famous was Anton Dreher of Vienna. His contribution was the reddish amber-colored lager brewed with what we now call "Vienna malts." The style is no longer the dominant style in Vienna (as Dreher turned his energies to the awesome task of converting Italians into beer drinkers) and has been adapted by the Bavarians as a special brew associated with the Oktoberfest.

It is ironic that Munich's Spaten Brewery should be credited with starting the tradition of an amber-colored Oktoberfest beer. It was Spaten's Gabriel Sedlmayr who pioneered refrigerated fermentation, thus removing one of the fundamental reasons for having a festival in October at all—the ceremonial killing-off of the last of the March Beer. March Beer was the last brew of the previous winter season, brewed extra strong to last through the non-brewing summer months. Fortunately, Sedlmayr recognized a good party when he saw one, and introduced bottom-fermented Märzenbier brewed along the lines of the Vienna style.

As with the other darker styles of Bavaria, amber beers are being edged out in favor of lighter-colored beers even at the Oktoberfest. If you request a Märzenbier, however, it can still be found, and most breweries offer it year round, some shortening the name simply to Fest.

The color of a Märzenbier is its most attractive feature. It's a deep amber with a reddish tint, and its clarity should be no less brilliant than a Pilsener. The aroma should be of gently-roasted malt, and the flavor should affirm that impression. The alcohol content ranges from 5 percent to 6 percent by volume. Serve at cellar temperatures and don't feel like you have to wait until October.

Tasting Reference:

Spaten Ur-Märzen Oktoberfest or Paulaner Wies'n Märzen.

"Reggie's Best" Nancy Vineyard

A malty example of the style is produced here with an extra large volume of crystal malt. But a counterpoint to this sweetness is provided by the dry finish of the Munich malt or roasted barley. This style of beer is a showcase for the homerun finish of Nugget hops.



Recipe for 5 gallons

- 5 lbs. amber dried malt, or 6 lbs. light malt syrup
- 2 lbs. cracked crystal malt
- ¼ lb. Munich malt or 2 tablespoons roasted barley, cracked
- ¾ oz. Nugget hops, first bittering addition
- ¾ oz. Hallertauer hops, second bittering addition
- 1 teaspoon gypsum and 1 teaspoon salt
- 1 oz. Hallertauer or Cascade hops for aroma
- 14 gm. Red Star lager yeast
- 1 C. corn sugar for priming

Boil one quart of water in a saucepan and add the crystal and Munich malt and an additional two cups tap water. Stir for several minutes to release the color and aroma of the malts. Strain out the malt, collecting the liquid into the boiling pot. Rinse the malt thoroughly with several quarts of tap water and discard spent grains.

Stir in the amber dry malt and the gypsum and salt, bring to a boil and add the first bittering hops. Continue to boil for 30 minutes and add the second bittering hops. Boil another 20 minutes, then turn off heat, cover the pan and begin cooling. When the wort is cooled below 180 degrees F, stir in the aromatic hops. Finish cooling the wort. Pour the wort into a fermenter with water to make 5 gallons and add the yeast. Ferment in a cool, dark place.
©1986, Nancy Vineyard

CONTINENTAL DARK (Münchner Dunkel)

When cold fermentation was being pioneered, it was Munich that became associated with dark beers. Whereas most of the world's brewers consider a Pilsener to be their normal brew and dark beers a specialty, the Bavarians still consider a good dark brew to be fundamental. The traditional Münchners rarely exceed 5 percent alcohol by volume (the better to drink in quantity), and have a robust malty (but not too sweet) flavor that goes very well with food, particularly roast beef. If you

are ever going to pull your prized stein down off the shelf, this is the beer to drink out of it.

Tasting Reference:

Küllbacher Monkschhof Kloster-Schwarzbier.

"Down Under Dark Lager" Charlie Papazian

Here's a rich, deep, dark brew that needs an introduction. The malt extract used is extremely dark, so there is no need to darken it with specialty roasted grains. Toasted malt adds a great malt aroma to the character and the finishing hops add a zesty freshness that will amaze you and your friends. This is a real crowd pleaser for those who think (or know) they like dark beer but don't like it too bitter. It is fuller flavored than a Becks or a St. Pauli Girl dark and much darker, but very smooth.

Recipe for 5 gallons

6 lbs. plain dark Australian malt extract syrup
¾ lb. toasted malted barley
8 Homebrew Bittering Units (I used ¾ oz. of 10 percent alpha acid Eroica hops) for boiling
1 oz. Tettnanger or Hallertauer hops for finishing
2 pkts. of lager yeast or liquid yeast culture
¾ C. corn sugar for bottling
Original gravity: 1.040 to 1.045
Final gravity: 1.012 to 1.017

Toast uncrushed malted barley in a 350 degree F oven for 10 to 15 minutes. Remove from oven and crush. Add to 1½ gallons of cold water and bring to a boil. When boiling commences remove grains with a strainer.

Add malt extract and boiling hops and boil for one hour. During the final one to two minutes add the finishing hops. Strain and sparge the wort into three gallons of cold water in your sanitized fermenter.

Add yeast when temperature is below 75 degrees F. Ferment at lager temperatures (50 to 60 degrees is preferable for homebrewers, 40 to 50 degrees is better if practical).

Bottle with corn sugar when fermentation is complete.

"Münchner" Ted Whipple

For a change of taste nothing beats a dark lager brewed in the Bavarian Dunkel style. Residual maltiness, a light body and the distinctive Hallertauer hops make a welcome change from English ales.

This beer makes a very authentic Munich Dunkel. The Ireks malt extract seems to ferment out a little better for this beer style than do the English extracts. Although the boiling of grains is generally not recommended, it does not seem to contribute harshness in this beer when the black malt is kept whole. However, boiling of the malt does give a good coffee brown color.

Recipe for 5 gallons

6.6 lbs. Ireks Munich amber extract
2 oz. black patent malt, whole
1 tsp. water crystals if water is soft
1½ oz. Hallertauer hops (6.5 AAU) for boiling

1 tsp. Irish moss
½ oz. Hallertauer hops for finishing
2 pkts. Vierka lager yeast
1 tsp. gelatin
¾ C. corn sugar for priming
Original gravity: 1.045

Bring 2 gallons of water to a boil and add water crystals if needed. Add extract and black malt with the heat off, mix well before turning the heat on again.

Boil for a total of one-and-a-half hours. After one-half hour add half the boiling hops; after one hour add the rest of the boiling hops. Fifteen minutes from the end of the boil add the Irish moss; at end of boil turn off the heat and add the finishing hops.

Let the wort settle for half an hour then sparge into fermenter with cold water to make 5 gallons. Force cool to 75 degrees F (bathtub full of cold water works great!) and pitch the yeast. Ferment as a lager in very cool temperatures.

"Märzenbier" Fred Eckhardt

This recipe is from 1971, and I used it to formulate my Märzenbier recipe for the second edition of the *Treatise on Lager Beer* that year.

Recipe for 5 gallons

3.3 lbs. Munton and Fison amber malt extract syrup
4 lbs. pale dried extract
1 oz. Perle or Northern Brewer hops at about 10 percent alpha acid, (pellets or flowers) for bittering
1½ oz. Hallertauer hops at about 5 percent alpha acid, (pellets or flowers) for aroma
A good lager yeast; if Red Star use 3 pkts.
1 C. dry malt extract for priming
Original gravity: 1.056
Terminal gravity: 1.013
Alcohol content 4.6 percent by weight (5.8 percent by volume)

Bring 2 gallons of water to a boil. Add the dry extract, mixing it well, then the extract syrup. Return to a boil and after 15 minutes add half the bittering hops. One-half hour later add the rest of the bittering hops and continue boil for 30 minutes. Add the aromatic hops, remove from heat and let the wort settle for 30 minutes. Sparge into cold water to make 5 gallons.

Add the yeast at 65 to 70 degrees F and ferment at 55 degrees to a gravity of 1.015. Rack and finish the ferment at 40 degrees, then lower the temperature to 32 degrees and lager for about one month for each 25 original gravity points. Add additional lager yeast along with priming malt when bottling.

"Oktoberfest" Russell Schehrer

Last fall our homebrew club decided to try variations on a theme: one of Charlie Papazian's recipes was used and individuality was optional. This Oktoberfest turned out wonderfully and is one of my standard beers. This yeast culture has provided good results for a few of the club members. Hallertauer hops were used because it is

an Oktoberfest. The beer seemed to age quickly; I remember enjoying it quite a bit while bottling.

Recipe for 5 gallons

6 lbs. amber malt extract
8 oz. crushed crystal malt
2 oz. crushed roasted barley
3 oz. Hallertauer hops for bittering
½ oz. Hallertauer hops for finishing
Pinch of Irish moss
Liquid German lager yeast culture
Original gravity: 1.047
Terminal gravity: 1.018

Add grains to 2 gallons of cold water and bring to a boil. Strain out the grains, add the extract and return to a boil. Add the bittering hops and continue the boil for one hour, adding Irish moss for the last 5 minutes and finishing hops for the final minute.

Sparge into fermenter with cold water to make 5 gallons. Pitch yeast at 65 to 70 degrees and ferment at 40 to 50 degrees if possible. Bottle when fermentation is complete.

"Bauer's Oktoberfest"

Gary Bauer

Munich has a reputation for making maltier, fuller-bodied beers with a hint of sweetness rather than dryness. Hence, the formula stresses fresh maltiness combined with a taste brought on by the alcoholic strength, longer aging and the use of mellow European hops.

Recipe for 5 gallons

7 lbs. EDME DMS malt extract
1 lb. dry amber malt extract
1 oz. Hallertauer hops for bittering
½ oz. Hallertauer hops for flavor
½ oz. Hallertauer hops for aroma
2 pkts. Red Star lager yeast
¾ C. corn sugar for priming
Original gravity: 1.053 to 1.055

Mix the extracts with 1½ gallons of boiling water. Add bittering hops and boil for one-half hour; add flavoring hops and continue the boil for another half hour. Add the aroma hops for the last 5 minutes of the boil. Strain out the hops and add the wort to cold water to make 5 gallons.

Pitch the yeast when temperature is below 75 degrees F. Ferment out at 50 to 60 degrees F. Prime and condition for 4 weeks at 40 to 50 degrees and age for 3 weeks at 30 to 50 degrees.

"Continental Dark Lager"

Colonel John Canaday

The color of this beer will be somewhere between a rich amber and a dark brown. A glance at the ingredient list might indicate that this beer is too simple to be good, but when you use the finest ingredients you will find that quality is spelled s-i-m-p-l-i-c-i-t-y.

Recipe for 5 gallons

6.6 lbs. Ireks-Arkady Munich amber malt extract
½ C. crushed black patent malt
14 Homebrew Bittering Units of Hallertauer hops for boiling
1 oz. of Hallertauer hops for aroma
Lager yeast
¾ C. corn sugar for bottling
Original gravity: 1.046
Terminal gravity: 1.011

Add grains to one gallon of water and heat almost to boiling. Remove the grains and add the malt extract and boiling hops. Boil for one hour and add the aroma hops during the last two minutes of boiling.

Transfer the wort to the fermenter and add cold or chilled water to reach a temperature below 80 degrees F.

Add lager yeast and ferment at a temperature below 60 degrees F. Prime and bottle when all signs of ferment have stopped.

"Joe's Continental Dark Lager" **Shasta County Suds'ers - Joe Werner**

This fine dark lager won second place in the Fifth California State Homebrew Competition and continues to be a club favorite.

Munton and Fison malt extract syrup was chosen for its easy availability and great reputation. By combining the light and dark an amber appearance was achieved that was heightened with the use of crystal malt. The crystal malt also assisted in the achievement of a creamy, long-lasting head.

Irish moss was used to assist in coagulation of protein matter, and gelatin finings were added to give the beer that crystal-clear, polished appearance.

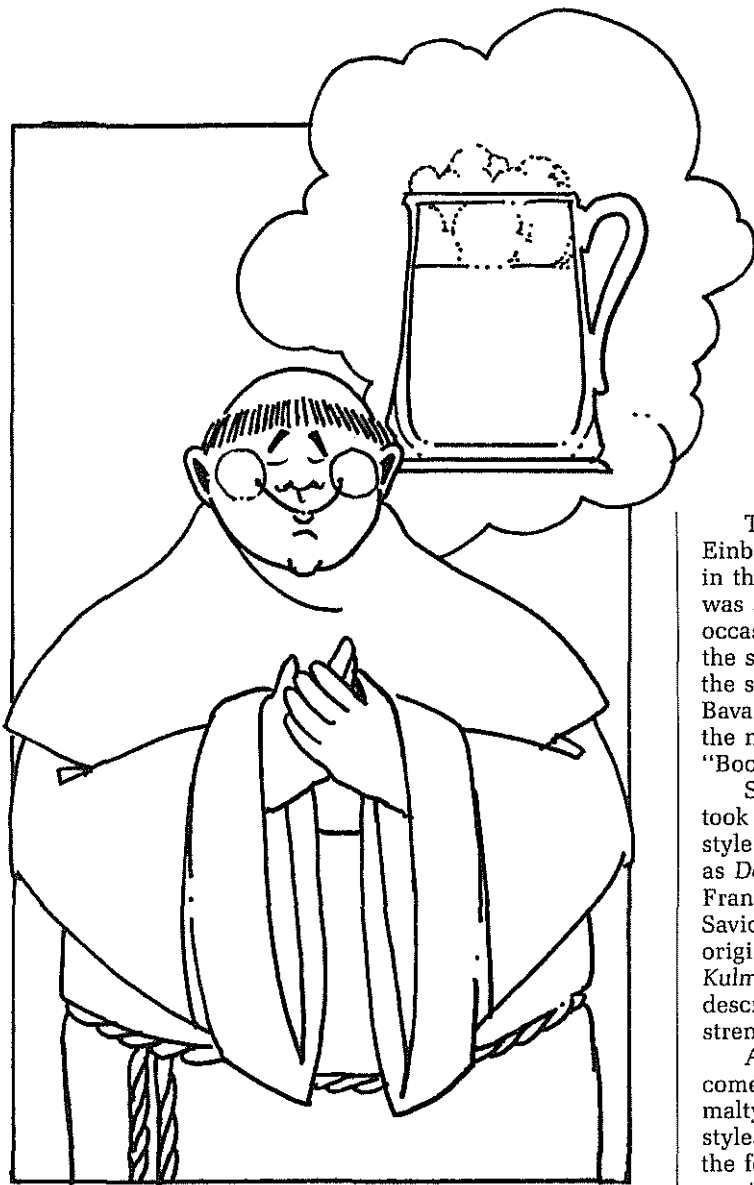
The use of Hallertauer and Saaz hops gives just the desired degree of hop bite and aromatic qualities.

Recipe for 5 gallons

3.3 lbs. Munton and Fison unhopped dark malt syrup
3.3 lbs. Munton and Fison unhopped light malt syrup
1 C. English crystal malt crushed
1 tsp. Irish moss
2 oz. Saaz and ½ oz. Hallertauer hop pellets for bittering
½ oz. Hallertauer hop pellets for finishing
2 pkts. Red Star lager yeast
1 tsp. gypsum (if needed)
1 tsp. salt (if needed)
½ oz. gelatin finings
1 C. corn sugar for bottling
Original gravity: 1.045
Final gravity: 1.013

Add the crystal malt to 1½ gallons of cold water and bring to a boil. Strain out the grain, add the extracts and bittering hops and boil for one hour. Add the finishing hops, remove from heat and let the wort sit for 15 minutes. Strain out hops and add to cold water to make 5 gallons.

Pitch yeast when temperature is below 75 degrees F. Bottle when fermentation is complete.



BOCK AND DOPPELBOCK

Bock is the most easily confused of all beer styles. All generalizations in describing Bock must be followed by an exception. But first of all, forget the absurd notion that it has anything to do with cleaning the bottom of barrels, probably the most widespread of all beer myths.

Generalization One—Bock beer traditionally is associated with springtime, especially the month of May. But sometimes it's released in December (bock is German for billygoat, thus Capricorn, thus December) and Doppelbock is associated with the Frühjahrsbierfest in March.

Generalization Two—Bock beer traditionally is dark. But Munich's Paulaner Brewery introduced "Hell-Bocks" (pale-ocks) in the 1920s and most Bavarian breweries now offer a Bock beer brewed with pale malts.

Finally, the one generalization you can rely upon—Bock beer is strong, at least 6¼ percent alcohol by volume. However, the popular American Bocks are usually just a dark version of their normal beer.

The origins of Bock beer are traced to the town of Einbeck in Lower Saxony, Germany's greatest brewing city in the 13th and 14th centuries. The Einbeck brew's fame was such that it was exported all over Europe for special occasions, and was brewed particularly strong to extend the shelf life. Enough demand was created in Bavaria for the style to be adapted by local brewers, and it is the Bavarians who have made the style their own (corrupting the name over the centuries to "Oanbock," and then just "Bock").

Surprisingly, it was an order of Italian monks that took the next step and introduced an even stronger beer style (7.5 percent alcohol and up) that came to be known as Doppel or double bock. The monks of the order of St. Francis of Paula named their beer "Salvator" after the Savior. All subsequent Doppelbocks pay tribute to the original by using the "-ator" suffix in their name. ECU's Kulminator is a famous example, whose name is also very descriptive, as the beer is over 13 percent alcohol in strength.

Although the Bavarian Bock and Doppelbock beers come in a variety of colors, they are all dominated by the malty flavor that is a component in all Bavarian lager styles. The aroma and the flavor place malt squarely in the foreground, and the long aging effectively removes the yeast fruitiness associated with strong ales.

Tasting References:

Hell-Bock: Külmbacher Schweizerhofbrau Bock; Bock: Külmbacher Monkschhof Kloster-Bock; Doppelbock: Paulaner Salvator.

"The Long Road Bock" (Made with the Great Fermentations Bock Kit) Byron Burch

This is a fully dark bock with plenty of roasted character, and relatively light hopping. Lactose sweetens the brew considerably and rounds off the flavors. If you wish to explore the world of bocks, this kit will get you under way.

Recipe for 5 gallons

6.6 lbs. dark hopped malt extract
1 pkg. aromatic hops
1 pkg. water treatment and yeast nutrient
14 gr. Muntona ale yeast
1 pkg. priming sugar with lactose

Dissolve the malt extract and water treatment pack in one or more gallons of warm water, as much as your kettle will permit and still leave room for foaming. Bring to a boil, stirring and watching for boilover. Boil for 30 minutes. Turn off the heat and cool in a water bath. Pour into a fermenter with water to make 5 gallons, add the yeast and aromatic hops. Cover and ferment in a dark, cool place.

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"Bauer's Bock" Gary Bauer

Bock beer is famed for being rich, malty, full-bodied and robust in flavor. A generous amount of malt is used in this formula to obtain these characteristics.

Recipe for 5 gallons

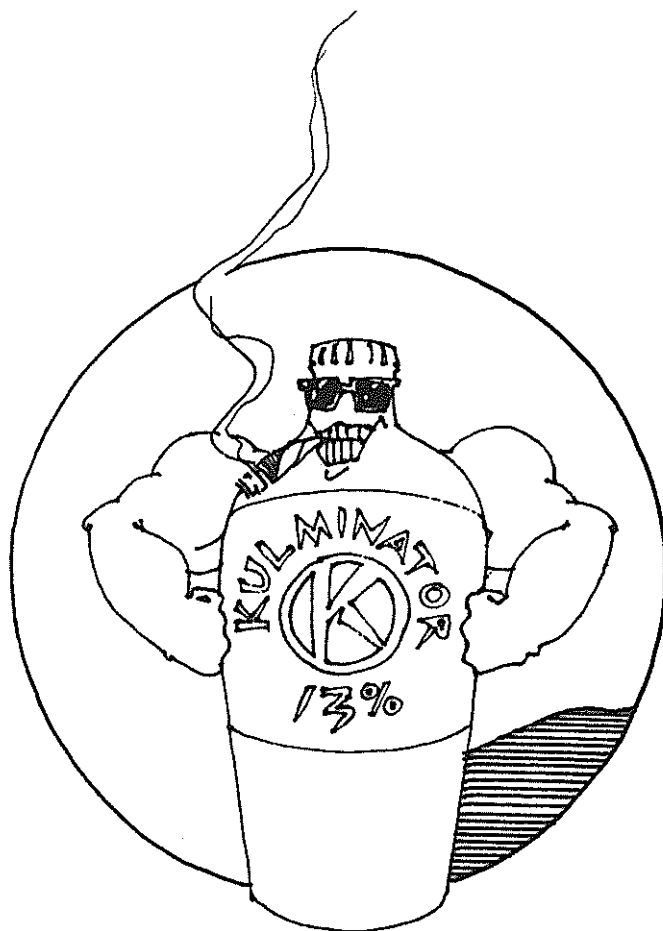
3.5 lbs. EDME dark malt extract syrup
4 lbs. dry dark malt extract
½ lb. crushed crystal malt
½ tsp. non-iodized salt
1 oz. Hallertauer hop pellets for bittering
¾ oz. Hallertauer pellets for flavor
¼ oz. Hallertauer pellets for aroma
2 pkts. Red Star lager yeast
¾ C. corn sugar for bottling
Original gravity: 1.050 to 1.055

Add crystal malt to 1½ gallons water and bring to a boil. Strain out the grains and add the malt extracts and bittering hops. After boiling for 30 minutes add the flavoring hops and continue boil for 30 minutes more. Add the aroma hops for the last 15 minutes of the boil. Strain out the hops and add the wort to cold water to make 5 gallons.

Pitch yeast and ferment at 50 to 60 degrees F until done. Prime and condition for 3 weeks at 40 to 50 degrees and let age for 3 weeks more.

"Bock Beer" Fred Eckhardt

This recipe is adapted from my 1978 bock beer recipe in *Amateur Brewer* No. 5.



Recipe for 5 gallons

6.6 lbs. Ireks-Arkady Munich Amber German malt extract
2 lbs. caramel (crystal) malt crushed, preferably 40 to 60 Lovibond color
2 oz. Hallertauer hops (5 percent alpha acid) for bittering
½ oz. Hallertauer hops for aroma
A good lager yeast; if Red Star use 3 pkts.
1 C. Dry malt extract for priming
Original gravity: 1.058
Terminal gravity: 1.014
Alcohol content: 4.7 percent by weight, 5.9 by volume

Place the caramel malt in a nylon bag, add it to 2 gallons of water in your pot and bring it to a boil. When it is near boiling remove the bag of grain, squeezing as much liquid from it as you can. Bring to a boil and add the extract. Return to a boil and after 15 minutes add half the bittering hops. One-half hour later add the rest of the bittering hops and continue boiling for 30 minutes. Add the aroma hops, remove from heat and let the wort settle for 30 minutes. Sparge into cold water to make 5 gallons.

Add the yeast at 65 to 70 degrees F and ferment at 55 degrees to a gravity of 1.016. Rack and finish the ferment at 40 degrees, then lower the temperature to 32 degrees and lager for about one month for each 25 original gravity points. Add additional lager yeast at bottling along with priming malt.

"Blister Lips Doppelbock" Charlie Papazian

Blister Lips Doppelbock is a hefty full-bodied, full-flavored, full-strength lager beer that has all the charm of a German-style doppelbock, without being excessively sweet to the palate. Because this is a high-gravity beer care should be exercised before fermentation to aerate fully the wort so that proper attenuation is reached. If all is well you should have a light chocolate brown lager, sweet but balanced with a palate-cleansing hop bitterness at a strength of 9 percent alcohol by volume. This is a brew to bottle in the smallest bottles you have and let age for at least six months in the bottle before you really break into the stash.

Recipe for 5 gallons

12½ lbs. plain light dried malt extract
6 oz. crushed chocolate malt (for a light brown color)
8 oz. crushed crystal malt (for color, head retention and slight caramel aroma)
25 Homebrew Bittering Units boiling hops (I used 2½ oz. of 10 percent alpha acid Eroica hops)
1 oz. Tettnanger flavor hops
1 oz. Cascade finishing hops
2 pkts. lager yeast or strong liquid yeast culture
¾ C. corn sugar for bottling
Original gravity: 1.093 to 1.100
Terminal gravity: 1.020 to 1.030

Add the crushed chocolate and crystal malt grains to one gallon of cold water and bring to boil. When boiling begins, strain out grains. Add 2½ more gallons of water,

dried malt extract and boiling hops. Bring to a boil and hold at a rolling boil for 1½ hours. During the final 15 minutes add the Tettnanger hops. During the final two minutes add the Cascade finishing hops.

Strain and sparge the hot wort into a sanitized fermenter filled with two gallons of cold water. When wort has cooled to below 75 degrees F, pitch your yeast. When visible signs of fermentation begin, try to keep fermentation at lager temperatures of 50 to 60 degrees or lower if possible. Bottle with ¾ cup corn sugar when fermentation is complete.

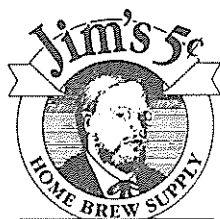
BITTER

Bitter is the kind of beer you want to marry. You might like to horse around on the side with the exotic types, but you wouldn't introduce them to your mother. Bitter is a beer you can live with day in and day out.

The British drink Bitter in the pub, and take Pale Ale home in the bottle (or send it in kegs to the United States). It would be simple enough to say that Bitter is the draft equivalent of Pale Ale, since they may be labeled under the same name, but they are actually two different beer styles.

Bitter is one of the weaker of the world's traditional brews, the majority of examples being in the neighborhood of 4 percent alcohol by volume. It is also very lightly carbonated when served in its natural state (conditioned in the barrel and hand-pumped from the cellar via a beer engine). The result is a beer that is easy to drink in quantity, which is nice, because the British pint measure is a very generous portion and several rounds may be called for on any given evening.

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A generous dose of bittering hops gives the style its name, but not to the point of being out of balance with the malt. Top fermentation and natural conditioning at cellar temperatures result in a beer where the yeast flavors remain a central part of its character.

Tasting Reference:

British draft Bitter is not stable enough for export, but several breweries have attempted to bottle it: Theakston's Best Bitter, Greene King, and Pope's 1880 Beer are reasonable facsimiles of the draft style. Several North American microbreweries specialize in the style. If you're ever in Hopland, Calif., ask for their Peregrine Ale.

"A Prince of a Bitter" Nancy Vineyard

A good example of the style should give back a hint of amber color when held to the light, and should have a bright hop bitterness to accent the medium malt character. This version shows well under these above-named criteria and offers its own reward in the spicy combination of continental hops added piecemeal throughout the boil.

Recipe for 5 gallons

4 lbs. light dry malt extract
½ lb. crystal malt
2 tsp. gypsum
1 tsp. salt
½ oz. Spalt hops, first bittering addition
½ oz. Northern Brewer hops, second bittering addition
½ oz. Styrian Golding hops, third bittering addition
14 gm. Muntona ale yeast
½ C. corn sugar for priming

Dissolve the dry malt in water in boiling pot. Bring to a boil, stirring to prevent scorching and boilover. Add the gypsum, salt and first bittering hops, and boil for 20 minutes. Add the second bittering hops and boil for 20 more minutes. Add the third bittering hops and boil for a final 20 minutes. Turn off the heat and add the whole crystal malt, cover and cool the pot in a water bath. Pour the wort through a strainer into the fermenter. Add cold water to make five gallons and then add the yeast. Ferment in a cool, dark place.

©1986, Nancy Vineyard

"Ploughman's Revenge" Terry Foster

This is a coarser beer than pale ale, with a relatively high proportion of crystal malt added, heightening the color to a deep copper hue, improving its body and adding a nice caramel overtone to the smoothness of the pale malt. As the name implies, it should have a definite hop bitterness, so Talisman hops were chosen because they give a sharp, not harsh flavor. Saaz were selected for their delicate, slightly sweet spiciness in the nose and on the palate. Note the lower amount of priming sugar—this is traditionally a cask-conditioned, low-carbonated, draft beer. Excessive gas, as with many ales, hides much of the maltiness of this brew. The balance of malt, bitterness and

hop character makes this a subtly complex brew, even though it is, and is meant to be, a good "drinking" beer.

Recipe for 5 gallons

5½ lbs. pale malt extract syrup
½ lb. crushed crystal malt
2 oz. Talisman hops for bittering
¼ oz. Saaz hops for aroma
2 pkts. ale yeast
½ C. corn sugar for priming
Original gravity: 1.040 to 1.042
Terminal gravity: 1.006 to 1.010

Mix the extract and crystal malt with 2 gallons of water. Bring this to a boil and strain out the grains; add bittering hops and boil for one hour. Add the aroma hops at the end of the boil, let the wort cool for 5 to 10 minutes, strain out the hops, and add the wort to cold water to make 5 gallons. Pitch the yeast and ferment out at 60 to 70 degrees F.

If you have the equipment, this is better as a draft, rather than a bottled beer. Prime and drink as soon as it is conditioned (1 to 2 weeks). This beer should be drunk at 50 to 55 degrees F; i.e. cool, not chilled.

"Taunton Hill Celebration Bitter" Ted Whippie

The highlight of our summer picnics is the keg of Taunton Hill Celebration Bitter. This is a brew made in the traditional English pub manner; fermented quickly, conditioned in the keg just long enough to almost clear and meant to be drunk quickly. This is an ale with good malt character and a lot of hops—typical of the ales from southern England.

Recipe for 5 gallons

6.6 lbs. John Bull light malt extract
½ lb. crushed crystal malt
1 tsp. water crystals if water is soft
1 oz. Northern Brewer hops for boiling
1½ oz. Cascade hops for boiling (total 14 HBU for boiling)
1 tsp. Irish moss
1 oz. Cascade hops for finishing
2 pkts. EDME ale yeast
½ C. corn sugar for priming
Original gravity: 1.036

Add crystal malt to 2 gallons of cold water and bring to a boil. When boil starts, remove from heat, strain out the grains and dissolve extract and water crystals (if needed). Return to a boil and after one-half hour add the Northern Brewer hops. Boil 30 minutes more and add the Cascade hops and continue boil for 30 minutes, adding Irish moss for the last 15 minutes. Remove from heat and add the finishing hops and let the wort settle for 30 minutes. Sparge into a fermenter with cold water to make 5 gallons.

Pitch yeast at about 75 degrees F and ferment for 3 to 4 days. Rack to keg, prime and condition for 5 to 6 days.

"Carp Ale" Russ Schehrer

Through a series of connections three or four years ago, I received a copy of a chart of recipes. From this I brewed my first Carp Ale; it was supposed to be like a Bass Ale: bass—a fish, carp—a tacky fish. This recipe summarizes my recipes for this brew. It represents some 10 different batches over the last three years and has always resulted in a very palatable beer. Regarding ingredients, the gypsum has varied with my water source. If hard well water was used, then no gypsum (or very little) was added compared with softer city water. Hops depended on what was available. Although I like using Northern Brewer or Bullion with an English-style bitter, Cascades are usually quite fresh and easily obtainable, hence their use. Dry hopping as well as a last-minute boil have been used for finishing, although I currently dry hop everything. I usually rack with one teaspoon of gelatin. Carp Ale won second place as a Pale Ale in 1984 and the British Bitter Champion award in 1985.

Recipe for 5 gallons

3.3 lbs. Munton and Fison light extract or 3 lbs. dry light malt extract

3.3 lbs. Munton and Fison amber extract or 3 lbs. dry amber malt extract

1 lb. crushed crystal malt

3 oz. Fuggle hops for boiling and 1 oz. Goldings for finishing

or

3 oz. Cascade for boiling and 1 oz. Willamette for finishing

or

2 oz. Northern Brewer for boiling and 1 oz. Cascade for finishing

0 to 6 tsp. gypsum (as needed)

Pinch of Irish moss

EDME ale yeast

½ C. corn sugar to prime
Original gravity: 1.050 to 1.052
Terminal gravity: 1.012 to 1.019

Add crystal malt to 2 gallons of cold water and bring to a boil. Strain out grains, add the extracts and gypsum (if needed) and return to a boil. Add the boiling hops and continue boil for one hour, adding Irish moss for the last 5 minutes. Add the finishing hops for the last minute of the boil or dry hop them in your fermenter. Sparge into fermenter with cold water to make 5 gallons.

Pitch yeast at about 75 degrees F and bottle when fermentation is complete. This beer will only require a week or so to condition.

"Surrey Special Bitter" Terry Foster

This straightforward beer has a nice coppery color from the amber extract. The use of amber results in a little more body and mouth feel, than if just a pale extract were used. The use of a fair amount of the medium alpha-acid hop, Cascades, gives a clean, fairly high level of bitterness with a trace of floral character in the background.

This is a good, standard-strength beer, with not too much complexity, but a pleasant maltiness backed off with a hearty hop bitterness. It may never charm or intrigue you, yet it will somehow seem to slip down much more easily than you expect. Its drinkability is helped by the unusually low level of carbonation; higher levels can make this beer seem thin and excessively bitter.

Recipe for 5 gallons

6.6 lbs. amber malt extract syrup

2½ oz. Cascade hops for bittering

2 pkts. dried ale yeast

¼ C. corn sugar for priming

Original gravity: 1.046 to 1.048

Terminal gravity: 1.008 to 1.010

dog's nose. A mixed drink of hot beer laced with gin and flavored with sugar.

invertase. An enzyme that hydrolyzes disaccharides to monosaccharides.

godisgood. An early name given to yeast by English brewers who did not understand its chemistry and workings.

ebulum. In old England, an ale flavored with elder, juniper, ginger and other herbs and spices.

distiller's beer. Fully fermented, non-hopped, all-malt beer that is distilled directly into whiskey.

cant. The piece of wood, at the head of the cask, in which a tap hole is pierced.

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Mix the malt extract with 2 gallons of water and bring to a boil; add the bittering hops and boil for one hour. Strain out the hops and add the wort to cold water to make 5 gallons.

Pitch the yeast and ferment out at 60 to 70 degrees F. Prime and drink as soon as it is ready (2 to 3 weeks).

This makes an excellent draft beer, it should be drunk at 50 to 55 degrees F; i.e., cool, not chilled.

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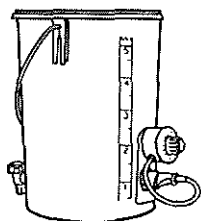
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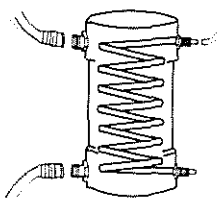
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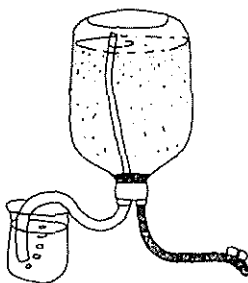
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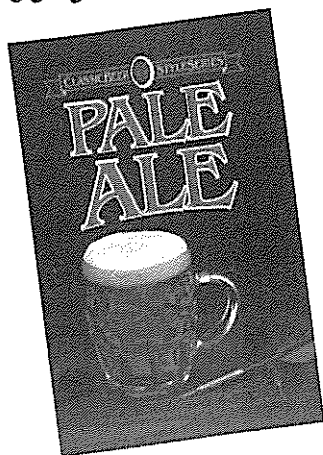
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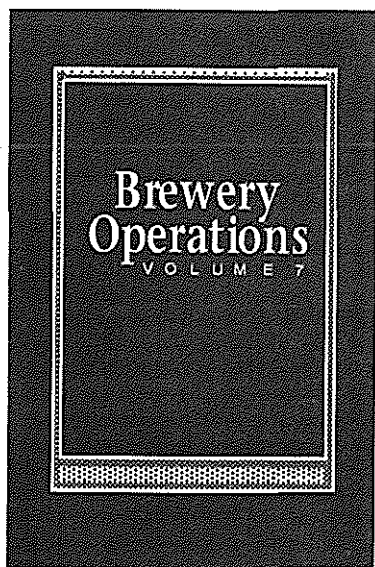


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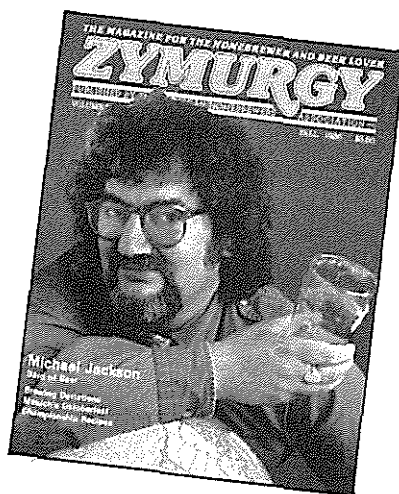


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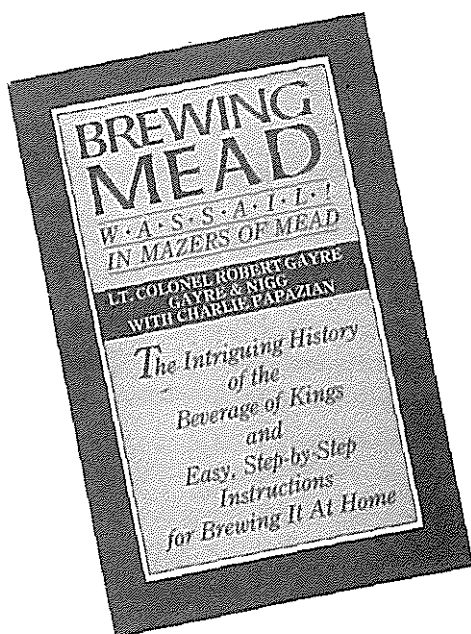
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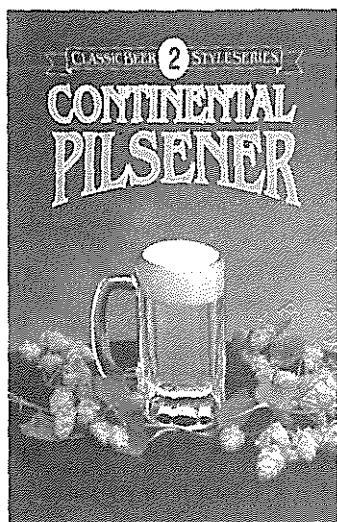
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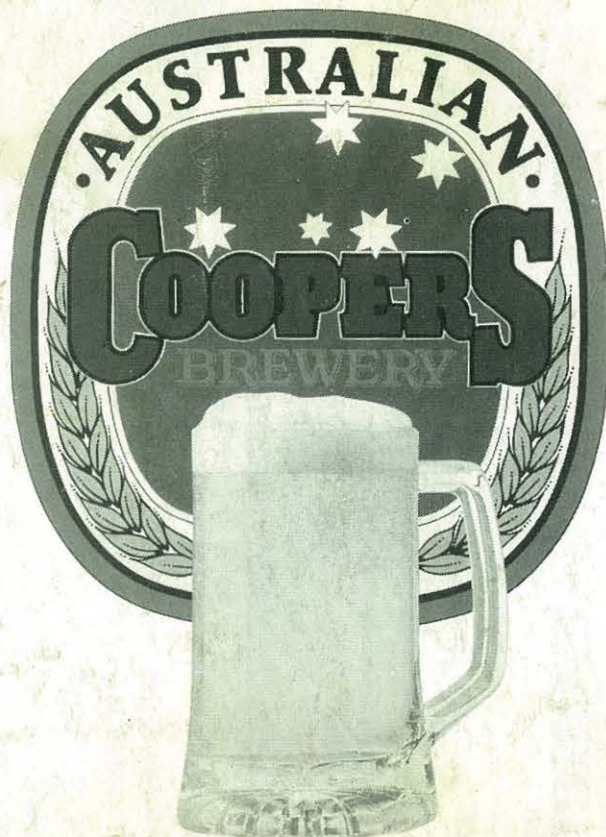


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