

Oktoberfest Alternatives

by Roger Bergen

As summer turns to fall, many brewers start to plan their Oktoberfest brewing. This installment of "Brewing in Styles" looks at the materials and techniques used for brewing traditional and modern Maerzen beers and offers some radical tips for brewing Oktoberfest-like ales. Ein prosit!

Several people called in response to the last installment of "Brewing in Styles" ("American Wheat," *BrewingTechniques* 1 [1], May/June 1993) to say that they were confused because many pubs and micros in the Midwest brew wheat beers in the traditional German manner, complete with the 4-vinylguaiacol clovelike character. Many fine German-style Weizenbiers are brewed in America. My intention was to point out that the "clean" type of wheat beer is uniquely and distinctly American, is brewed all over the country, and amply deserves to be recognized as a style in its own right. I will certainly provide an installment on German wheat beers and their special yeast and brewing techniques in the future. The Midwest, with its German heritage, seems to have truly embraced German wheat beer. A few years ago, I was shocked (being a Californian) to see imported Weizenbier floor-stacked next to the Pabst and Old Style at liquor stores in Chicago. Regional tastes are an important and exciting part of the specialty beer scene.

I would also like to welcome contributions for this column from professional brewers and other specialty brewers. Brewers are busy and hard-working people, but everyone benefits when knowledgeable people share their experience in beer styles. I would particularly like to see articles on brewing Trappist and Abbey ales and other neglected styles. Please contact me through *BrewingTechniques*.

OKTOBERFEST IN AMERICA

Munich's Oktoberfest has become the archetype of the beer experience. For most of the world's inhabitants, the word instantly conjures up images of tents packed with jolly beer drinkers swilling to the strains of an oom-pah-pah band in an ancient orgy of Gemuetlichkeit. Yet the Oktoberfest is of surprisingly recent origin, as is the beer style named for it. For more discussion of the origins and history of this style, so important in the 19th century lager revolution, I strongly recommend George and Laurie Fix's book *Vienna, Maerzen, Oktoberfest* and [Michael Jackson's New World Guide to Beer](#) (see "Further Reading" at the end of this article).

Oktoberfest beers received little attention from American brewers after Prohibition, but everything has changed with the current Great Beer Revival. In fact, we now seem to be in the midst of the Great Lager Revival. Americans are rediscovering the Germanic half of their brewing heritage, and a new wave of lager microbreweries and brewpubs is sweeping the country. Oktoberfest and Maerzen beers have found fresh popularity as

amber beers become ever more fashionable, and for many brewers the style is no longer a seasonal specialty but a year-round best seller.

CHARACTERISTICS

For our purposes, the terms Oktoberfest and Maerzen mean the same thing - an amber lager beer, slightly above average in gravity and alcohol, moderately hopped, with a pronounced malt flavor and aroma. A good Oktoberfest is a cleverly choreographed balancing act, with the malt supported and accented by subtle but discernible hop bitterness and flavor. It is robust, but not heavy or satiating. The wort gravity is on the high side as is traditional for a Festbier, now typically 13.0-14.0 degrees P (SG 1.053-1.057), although it was rather higher in the old days (15.5 degrees P [SG 1.063]). Often those who brew this style as an everyday beer lower the gravity to approximately 12.0 degrees P (SG 1.049). Hop rates and bitterness are moderate, typically 20-25 IBU. Color is usually 8-12 degrees L. Today some German Oktoberfests are rather pale, perhaps as low as 5-6 degrees L (the trend towards pale color can also be seen in bock beer).

IN THE BREWHOUSE

Although Oktoberfest is a malt-accented beer, hop character is actually very important because it provides a necessary complement to the malt flavor and aroma. A very low hopping rate makes an Oktoberfest flabby and one-dimensional. Oktoberfest, however, is a beer that is easy to overhop.

A deft balance is required. I agree with the Fixes that the best result is obtained from a single hop addition at 30-60 min before the end of the boil and that it is best to use only the traditional "noble" hops, whether domestic or European (Saazer, Hallertauer Mittelfrueh, Tettnanger, Spalter, Hersbruecker, or Styrian Goldings). The new domestic variety Mt. Hood (a variant of Hallertauer) is splendid, and a proportion of Fuggle or Willamette would not be entirely out of place. High-alpha hops should be used sparingly as a minor component of a blend.

Malt is the key to a great Oktoberfest. For the base malt, a good-quality two-row malt is strongly preferred. I personally believe that six-row malt has no place in all-malt beer (adjunct brewing was invented to dilute the flavor of six-row), but some of my Midwestern friends disagree. In an Oktoberfest, six-row malt can easily lead to heavy, obnoxious flavors and astringency from husk tannins. Excessive levels of dimethyl sulfide (DMS), with the unforgettable corny or vegetal flavor and aroma that result, are always a hazard when using six-row malt. Although the Fixes recommend European pilsener malt, few brewers can justify the cost when good two-row lager malts are now readily available throughout North America.

The situation is similar with specialty malts, especially Vienna and Munich malts. Despite general agreement that they are important for proper malt flavor and aroma, the Fixes chose to exclude Munich and Vienna malts from their recipes. Again, some would disagree. Gary Bauer used six-row specialty malts in his award-winning, and sadly departed, Ambier Vienna Style Beer (contract-brewed at several Midwestern regional breweries during the course of its life). "My Vienna malt was custom-produced by [Briess](#)

[Malting](#) to my specifications from plump barley. However, master brewers can use regular domestic Munich and Vienna malts in their formulations if they have exact specifications, understand them, and know how to adjust their formulations and production techniques accordingly."

Dave Miller of Saint Louis Brewery definitely prefers the Belgian malts from DeWolf-Cosyns. "I've used their Munich and Vienna malts as high as 50% of the grist with great results. High percentages give me really rich, intense flavors. For a softer style, try about 20%, which we just did in an [Altbier](#) that I'm really pleased with."

George Fix now recommends the inclusion of Munich and/or Vienna malt in Oktoberfest. "When we wrote the book, good-quality malts were hard to find. Now the situation has improved, and in addition to the Belgian malts I really like the Munich malt from Baird's in England [distributed in the U.S. by Great Western Malting]. It's very clean, has great flavor and aroma, and is made from the very best low-nitrogen barley. Brewers on the West Coast are doing great things with it. But still I think that using over 25% Munich or Vienna malts leads to flavor problems."

Caramel or crystal malt may also be part of the grist bill, and some brewers like to use a tiny amount of chocolate or black malt for added depth and complexity.

Although my German friends view this as heresy, I believe that the mashing method is a matter of personal choice and the equipment available. Most microbrewers and brewpubs use a single-temperature infusion mash, which gives very good results with modern domestic malts. In fact, many German "premium pils" breweries now use an upward infusion that is so abbreviated it is virtually single-temperature. Certainly, the less-modified European malts give a slightly better yield when using the upward infusion program that lager brewers prefer. Oktoberfest flavors can benefit from a decoction mash, and lager brewers with upward-infusion brewhouses can easily do a single decoction to increase color and aroma. The traditional triple decoction gives excellent results but has fallen out of favor because brewers view it as too time-consuming and energy-intensive to justify the results.

The best water for brewing Oktoberfest has moderate carbonate hardness. Soft water is fine, especially if treated with 50-100 mg/L calcium chloride. In contrast to amber ales, Oktoberfest is best brewed with sulfate levels below 50 mg/L, and gypsum is not an appropriate treatment because it promotes undesirable hop flavors and also can lead to excessive hydrogen sulfide production. Unfortunately, little can be done about high-sulfate water short of reverse osmosis or deionization, but a little calcium carbonate in the mash may mitigate the problem. Reinheitsgebot brewers cannot add minerals to their water and so must be very careful about alkaline sparge liquor.

IN THE CELLAR

Oktoberfest is by definition a lager beer, and one that is traditionally aged for a very long time - March to October! Of course this is impractical for micros and out of the question for brewpubs. Old-fashioned lager brewing uses a long, slow fermentation at 4-9 degrees

C (39-48 degrees F) followed by at least 8 weeks of lagering at 0-1 degrees C (32-34 degrees F). Kraeusening is a common practice in Maerzen brewing but is not essential.

One tried and true technique that still finds favor among modern lager brewers is the use of a "starting tub," now often called a "flotation tank." The wort resides in the tank for the first 24-36 h after pitching, during which time it has access to important growth nutrients in the cold trub, especially sterols. Meanwhile, any hot trub and hop particles sediment out, and when carbon dioxide production begins the cold trub floats to the surface. The just-fermenting beer is then racked out from under the cold trub into the fermentor for a very clean fermentation.

Fortunately, research and experiment has given us a much better understanding of the biology and chemistry of fermentation and flavor maturation than we had 100 years ago, making it possible to produce good lager beer in weeks rather than months. With most popular lager yeasts today, fermentation can take place at 10-14 degrees C (50-58 degrees F), achieving a rapid purging and reduction of acetaldehyde, diacetyl, hydrogen sulfide, and other undesirables. Many brewers use a "diacetyl rest" on the yeast for 2-3 days following fermentation, then slowly cool to lagering temperature over several days. This modern process can produce highly acceptable beer in as little as 3-4 weeks. Still, long lagering times really bring out the best in an Oktoberfest, gently mingling the flavors into a harmonious marriage of malt and hop. Lager for as long as possible.

Yeast selection is crucial. Some yeasts attenuate too thoroughly, others not enough. Small brewers generally prefer a yeast that has good flocculation characteristics for easy cropping and filtration. Ester and hydrogen sulfide production are important factors. Pitching rate is critical too; low pitching rates tend to stress the yeast and produce high ester levels, whereas pitching too much yeast can result in poor overall yeast growth and inadequate glycogen reserves when fermentation starts. Consult your yeast vendor for recommended pitching rates for your beer.

Wyeast Laboratories (Hood River, Oregon) is a leading supplier of pure culture yeast to small brewers and home brewers, and Wyeast's David Logsdon is the microbiological magician behind some of the great yeasts available today. David was kind enough to give *BrewingTechniques* his recommendations for Oktoberfest yeast.

"Our #2124 Bohemian yeast is the same as the famous Weihenstephan 34/70. It's the most popular lager yeast among microbrewers and brewpubs right now and is an excellent choice for Oktoberfest. 34/70 is moderately attenuating, leaving just a hint of sweetness in the beer. It has good flocculation, not too much and not too little. Malt and hop flavors come out well balanced, and ester production is low. It really likes the modern fermentation temperatures. Lately I've been recommending our new Czech strain #2278. It attenuates highly, making a beer that's on the dry side, but it really accentuates the malt in both flavor and aroma and seems to give a big, soft mouth feel. Ester production remains low even with high-gravity beers, so it's wonderful for Maerzen, bock, and doppelbock. Again it does well at modern fermentation temperatures. A real winner.

"Avoid our strains #2206 and #2308 when brewing Oktoberfest or other medium-high- to high-gravity beers. They're excellent yeasts, and #2206 is the most popular yeast in Europe these days. Unfortunately they both develop too much fruitiness in high-gravity beers. Those esters really clash with the malt in an Oktoberfest."

HERESY - THE ALE ALTERNATIVE

Now for something that will really upset my German friends. I apologize in advance to my purist brethren, but many brewpubs simply cannot tie up tankage for more than a couple of weeks, and most ale brewpubs lack a means of cooling the wort to even a modern lager pitching temperature. Yet many would like to offer an Oktoberfest as a seasonal special. Don't despair! It is not hard to make an ale that approximates the Oktoberfest style. You'll probably even call it Oktoberfest despite the protests of pedants like myself.

The trick is using the right yeast. Follow the guidelines above for formulation and brewing, and remember - don't overhop! Ferment and condition as normal for ale using one of the yeast strains recommended below. You will have an acceptable beer within two weeks and an even better beer after further cold aging.

Choose a German ale yeast. British ale yeasts are unsuitable because of their complex esters and, in some strains, diacetyl production. The same characteristics that are great in a pale ale are undesirable in an Oktoberfest. David Logsdon recommends his strains #1007 and #2107.

"#1007 is a Dusseldorf-type alt yeast. It's very clean and highly attenuating and makes a big, clean beer. Maybe it brings out the hops a bit too much for Oktoberfest, but overall it's very nice. We have a Kölsch yeast, #2107, that produces a more lagerlike character than any other ale yeast I know. It's highly attenuating, and flocculation is good. Ester production is extremely low, even in high-gravity beers, and there is actually some sulfur production. It gives a very rich malt character. It's a very unusual ale yeast and recommended for this style."

George Fix has his own favorite German ale yeast: "Wyeast #1338 is the same as Wissenschaftliche Station No. 338, originally introduced into this country by Gary Bauer. It's moderately attenuating and highly flocculent. This one is great if you want to brew an Oktoberfest-like ale, because the malt really comes through and the beer comes out big, soft, complex, and very malty. I'm really happy with the beers I've made with #1338."

[Widmer](#) Brewing Co. of Portland, Oregon, has been brewing highly untraditional and idiosyncratic but very successful top-fermenting Maerzenbier and Festbier interpretations for some years now. This brewery's creativity has been unconstrained by convention. At the same time, brewers from Philadelphia to San Francisco are now brewing excellent and characterful Oktoberfest/Maerzen beers by traditional Reinheitsgebot methods. In many cases this style is brewed year round and is a company's flagship beer, often accounting for more than 50% of total sales. Clearly Americans love Oktoberfest beer, and the style has a bright and malty future.

FURTHER READING

Eckhardt, F., *Essentials of Beer Style* (Fred Eckhardt Associates, Portland, Oregon, 1989).

Fix, G.J., and L.A. Fix, *Vienna, Maerzen, Oktoberfest* (Brewers Publications, Boulder, Colorado, 1991).

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Jackson, M., *New World Guide to Beer* (Running Press, Philadelphia, 1988).