

BREWING WITH BRIESS

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Brewing great barleywine is easier with Briess Special Processed Malts & CBW®

Barleywine is certainly a unique beer. With complex flavors, full body and an ABV of 8.4-12.0%, barleywine is a sipping beer and hearty winter warmer that improves with age.

But it can also be a challenge to brew. It needs a grist about three times larger than normal if you want to brew the same batch size and hit an Original Gravity of 1.090-1.120 (22.5-30 °Plato) and Final Gravity of 1.024-1.032 (6-8 °P). This can result in a very long brewing day because of the additional milling, mashing, lautering, graining out and boiling time. And many mash tuns are simply too small to hold the huge grist bill, which makes it necessary to brew a smaller batch.

However, by using Briess CBW® (Concentrated Brewers Wort) to boost gravity, you can shorten your brewing time, and get a full batch from whatever size equipment you have.

Getting started

Determining the types of malt to use depends



upon the final flavor notes you want your barleywine to have. However, the complex flavors of barleywine are best achieved by using small amounts of uniquely flavored, special processed malts.

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Brad Rush joins the Briess technical team

We're pleased to announce that Brad Rush has joined Briess as Manager of Quality, Health, Safety and Environmental.

Brad was a brewer and also worked in research and operations at Jacob Leinenkugel Brewing Company and, before that, Miller Brewing Company, both in Milwaukee. His experience also includes training and hands on work in quality analysis with a strong emphasis in sensory evaluation.

Brad is currently secretary of the Master Brewers Association of the Americas-District Milwaukee, a member of The Institute & Guild of Brewing, and actively participates in beer judging.



Brad Rush

Continued on page three

Brewin' barleywine from page one

Briess Special Processed Malts are just that—special processed. While many specialty malts are either kilned (Pale Ale, Munich) or roasted (Caramel), Briess Special Processed Malts are both kilned and roasted to develop unique, complex flavors. We make four distinctively different types of Special Processed Malts:

Victory® Malt

25-30 °L

Biscuity flavors

Adds deep golden to amber colors

Special Roast Malt

45-55 °L

Sour dough bread flavors

Adds deep golden to brown colors

Extra Special Malt (2-Row)

120-140 °L

Bready, raisiny, slight chocolate flavors

Adds copper to deep red colors

Special Briess™ (2-Row)

140-160 °L

Tangy woodiness, slight dry flavors

Adds red, rich mahogany colors

Creating the recipe

While barleywine is characterized by complex flavors, the grist is usually quite simple. Many brewers start with a large percentage—75 to 80—of standard 2-Row Brewers Malt, which is an excellent choice. However, you can use the same percentage of Briess Pilsen Malt (0.0-1.1 °L and a DP of 110-130) or Briess Pale Ale (3.2-3.8 °L with a DP of 80-100) for additional flavor.

Next, use 5-10 percent Caramel Malt to achieve the sweetness that is characteristic of barleywine. Briess makes Caramel Malts ranging in color from 10 °L to 120 °L.

Next, select one or two Briess Special Processed Malts to add the flavors you are targeting. We recommend using no more than two and keeping their total amount to 20 percent or less in order to help attain proper attenuation.

Remember, your huge grist will result in more non-fermentables—most of which are contributed by specialty malts—which means less attenuation. And while the non-fermentables contribute to barleywine's body, you still need plenty of fermentables to achieve

your target Final Gravity (Plato). Other techniques, such as a longer fermentation or multiple yeast pitchings, may also be necessary.

How big a grist?

By using CBW, you can reduce the size of the grist. Remember, however, that light CBWs replace base malt but not specialties. If you reduce the amount of specialty malts, you'll lose the flavor and color profiles that characterize barleywine.

First determine the Final Gravity (Plato) that you want—that determines the size of the grist and the amount of specialty malts to use. The grist will be large—up to three times larger than normal. Next, decide upon a smaller grist that you can brew without greatly increasing the time it will take to mill, mash, lauter, grain out and boil. Then determine how much Final Gravity (Plato) you will get from the smaller grist. That will tell you how much base malt you will need to replace with CBW.

For example, let's say your grist will produce an O.G. of 1.080 (20 °P), but you want 1.116 (29 °P). You need to raise it 9 °P.

We know that a pound of CBW per gallon of wort will raise the gravity by 9 °P (+.036 O.G.). So, if you have 310 gallons (10 bbl) of wort, you will need to add 310 pounds of CBW.

There are other ways to calculate how much CBW to use in lieu of base malt. If you'd like assistance, call our technical services staff at (920) 849-7711. They can also talk about the various styles of CBW available, and send samples.

CBW is pure malt and water

Whatever amount you use, Briess CBW is an *excellent* way to brew barleywine without putting in an 18-hour day. It makes brewing easier by decreasing lautering, graining out and boiling time, and it can be more cost efficient.

And our CBW is pure malt—we make it using only water and our high quality malts. So using CBW to up gravity in barleywine—or any beer style, for that matter—preserves the integrity of brewing a specialty beer, especially if you adhere to Reinheitsgebot.

You're invited to our hospitality in Austin, Texas

On Friday, October 18, from 8 p.m. to midnight, Briess Malting Company is holding a hospitality to help kick off the 2002 MBAA Convention in Austin, Texas.

Our hospitality will be held in the Foothills Room on the seventeenth floor of the convention hotel, the Hyatt Regency Austin on Town Lake. Members of the Briess Team who will be at the hospitality include CEO Monica Briess, President/COO Gordon Lane, Penny Pickart, Brad Rush (see page one), and Mary Anne Gruber.

We look forward to seeing you there. If you know you can make it, give us a call. We want to make sure we bring enough malted milk balls for everybody!



We're sponsoring the GABF Brewer's Gathering

This is a great time of year, isn't it? The season of dark beers, hearty ales, Oktoberfest and the Great American Beer Festival are all fast approaching.

We're so excited about it that, for the second year in a row, we're sponsoring the Brewer's Gathering at the 2002 Great American Beer Festival. It will once again be held at Wynkoop Brewing Company and is scheduled for Wednesday, October 2, from 6:30 - 9:30 p.m.

If you attend, look up members of the Briess Team who will be there to say hi and talk about what you're brewing these days. And, of course we'll be attending sessions and the awards ceremony.

See you there!

Brad from page one

Brad received a bachelor of science degree in environmental analysis from Carroll College in Waukesha, Wisconsin, and is currently completing his certification in quality engineering at the Milwaukee School of Engineering.

Brad joins the technical staff at Briess that includes fellow brewer Bob Hansen, brewing supervisor of our new Chilton-based extract plant.

"It's important for a malting company to have brewers on staff for many reasons," Brad said. "Quality, research and development are the most obvious. But our customers will directly benefit by the support we can provide our technical sales department.

"I've known Penny (Pickart) for several years. She's so responsive to her customers, and very knowledgeable of malt, beer styles and brewing. I look forward to working with her on a technical level here at Briess."

Brad also talked about the high quality that Briess Malting Company adheres to.

"I came from a very high quality brewery at Leinenkugel's," he explained. "They produce absolutely the highest quality beer possible. So I'm a stickler for quality, and the Briess reputation for quality was a real attraction to my joining the staff here."

Brad and his wife Kaylene have three children: five-month-old Rachel, two-year-old Brooke and five-year-old Becca. While the children keep him busy, he admits to finding time to doing some homebrewing and bike riding. He's also building a playroom in the basement for the girls.

Feel free to send an e-mail to Brad at brad.rush@briess.com, and look him up at upcoming industry events including the Briess hospitality planned for opening night of the MBAA Convention in Austin, Texas. See the article on the opposite page for more about that.



St. Louis Brewing Company paid a visit to our Chilton location recently. Brewmasters Stephen Hale and Sara Choler toured the malthouse, mill and new extract plant. They stopped long enough to have their picture taken in the new pilot brewery with their tour guides. Pictured (from left) are Briess Extract Brewing Supervisor Bob Hansen, Stephen, Briess Craft Brewing Sales Representative Penny Pickart, and Sara. Thanks for visiting us, Stephen and Sara!



We welcomed another visitor recently—Kelly Kuehl, who just recently joined Mid America Brewing Supply, Kasota, Minnesota. Mid America is a distributor for Briess Malting Company, and Kelly paid us a visit to get more fully acquainted with our company and capabilities. Pictured with Kelly in the Briess warehouse is Penny Pickart, Briess Craft Brewing Sales Representative.

CBW® can boost gravity, propagate yeast, add color and more

As we mentioned in our cover story about barleywine, Briess CBW® (Concentrated Brewers Wort) is a very effective way to boost gravity. But CBW, available in liquid and powder, has other applications as well: yeast propagation and color are two.

At our new manufacturing plant in Chilton, we make a spectrum of CBW using nothing more than our own base and specialty malts—no adjuncts or other extenders. Just pure malt and water. They range in color from very light to very dark: CBW Pilsen Light is very light,

about 20 °Lovibond, while A-6000 is almost black and just a little bit adds oodles of color. In addition, we make a light colored **certified organic** pure malt extract: 10000.

Call us for samples or with questions about our line of CBW products.



Availability | Selection | Consistency

Hey David, what's the difference between roasted and kilned caramel malts?



David Kuske is maltster at the Chilton Malting Division of Briess Industries, Inc. He has a Bachelor of Science Degree in biological sciences with a minor in chemistry, and extensive experience in malting, quality control and

research and development. David began his career at Ladish Malting in Jefferson, Wisconsin, in 1988 and joined Briess in 1995 at our Waterloo Malting Division. David now manages the production of more than 40 varieties of base and specialty malts at the Chilton Malting Division, and is active in the American Malting Barley Associations as a participant and presenter. He is also an active member of the MBAA, and past president of ASBC Local 4 Milwaukee Chicago.

First, it is important to understand the chemistry behind producing caramel malts and how different equipment design can affect the reactions. Producing caramel malt is essentially a two-step process. The first step involves conversion of the endosperm, which is temperature and especially moisture dependent enzymatic degradation of the starches and proteins into sugars, dextrans, amino acids and short chain polypeptides. These are the precursors to caramelization and maillard reactions.

Roasters are specifically designed to control the airflow during this process to minimize moisture loss. In addition, the small batch size and rotating action in a roaster allows for very rapid and uniform heating of the grain to the optimum temperature for enzymatic activity. All of this equates to a much more efficient conversion and thus higher levels of precursor production.

Kilns are essentially designed to dry large batch size quantities of malt over a period of 24-48 hours. Because of the large batch size, it is difficult to achieve uniform grain temperature across the bed. The burners used in a kiln are designed to heat great expanses of air which makes it economically unfeasible to retrofit them to achieve temperatures common in roasting. Modifications can be made to drying kilns in an effort to retain moisture for the conversion step, but moisture loss is much more prevalent.

Once the precursors are produced, the moisture is allowed to escape from the drum while the temperature of the grain is increased rapidly. Higher temperature applied at higher water activity allows for more efficient production of more complex maillard end products in higher concentrations. The maillard end products are all responsible for color development, but are unique in their flavor contributions. The Furans tend to provide sweet, sugary, caramel, fruity and malty flavors.



All Briess caramel malts are roasted. We operate both drum and traditional ball roasters (pictured above).

The Pyrans tend to give more breadlike and toasty flavors. The Pyrroles provide more nutty, raisin and licorice flavors, while the Pyrazines start providing chocolate, coffee, cocoa and even roasted nutty flavors.

It is our belief that caramel malts produced on a roaster have very different flavor profiles than caramel malts of similar color produced on a drying kiln. Because of the efficiency in conversion and higher heat application at higher water activity, the concentration and wider profile of maillard end products produced in a roaster provide more flavor intensity and complexity than caramel malts produced on a kiln.