Developing barley varieties will involve brewers and growers

Special Briess Report

Developing barley varieties will involve brewers and growers. This year marks the first full year that Briess has operated its full-scale barley operation in Wyoming. The operation consists of a 2.3 million bushel elevator, seed plant and network of 230+ dedicated barley growers.

Briess Director of Malting Operations Dave Kuske said he couldn’t be more pleased with the amount of acreage growers have contracted to grow for Briess. But Dave said Briess is looking ahead to both maintaining and increasing current barley acreage in the region.

Slowly introducing new varieties developed specifically for the American craft beer industry is one plan toward that goal. “Craft beer is all about flavor,” Kuske continued, “and craft brewers are hungry for new varieties with new flavors. But we recognize that these varieties have to work for the growers. Any new variety must be equally beneficial for the producer and the end user.”

Toward this goal, Kuske said he sees Briess assuming a new role. “Briess is a veteran supplier to Craft Malt Report,” page 2

White Labs releases yeast in PurePitch® for brewers

Since August, White Labs has shipped WLP001 California Ale Yeast to breweries in PurePitch® packaging. Utilizing the new FlexCell process, PurePitch reduces shipping costs for many shipments of most WLP001 California Ale Yeast packages due to the lighter packaging as compared to the previous commercial bottles. The yeast should continue to be stored at 4°C and should be kept refrigerated until time of use.

The next strain that was released in PurePitch by time of publication was WLP029 German Ale/Kölsch Yeast.

The FlexCell process uses patented technology to cultivate the yeast, improve yeast health and reduce the risk of contamination. Additionally, this process reduces the environmental footprint. For all details regarding the new FlexCell technology, PurePitch packaging, and WLP001 California Ale Yeast along with other strains, please log on to — http://www.whitelabs.com/innovation.

Also, a new video showing one of the brewers receiving and using PurePitch is shown at the link described above.

(For more on “How We Make Yeast,” including using FlexCell technology, turn to Page 5, and page 4 for Chris White’s column that explains the reasons behind the graphic).

Style Matters: Tips for Belgian-Style Gueuze Lambics

In each issue, CBQ spotlights a particular beer style and provides tips from an ingredient and fermentation perspective. In this issue we examine Belgian-style Gueuze Lambics.

Malt Notes:
This is a dry, light bodied beer that’s all about yeast character, so it needs to start with a clean base malt to let the yeast flavors carry through. It’s traditionally brewed with Pilsen Malt and about 35% raw wheat.

Even using 2-Row Brewers Malt could provide more malt character than is expected for a Belgian-style Gueuze Lambic. Because it’s so light colored and produces a crisp, clean wort, Briess Pilsen Malt (1.8°) makes an excellent candidate for this beer.

By Briess Malt & Ingredients Co.
Hop Notes:
“Hop bitterness is generally absent but a very low hop bitterness may occasionally be perceived. No hop flavor. No diacetyl. ... IBUs are approximate since aged hops are used; Belgians use hops for anti-bacterial properties more than bittering in lambics.”
— BJCP Style Guidelines

Yeast and Fermentation Notes:
Gueuze is a traditional Belgian style of beer made from blending old and young lambics. It is a light col-
Beer. And now we are developing strong grower relationships through our barley operations in Wyoming. That puts us in a unique position to function as a liaison representing both groups. Creating a win-win for producers to grow new malting barley varieties and for Craft Beer is important," he continued.

Why now?

Until recent years Craft Beer lacked the volume and voice needed to greatly influence malting barley breeding programs. But that's rapidly changing.

Statistics illustrate the growth of Craft Beer and its impact on the overall $100 billion U.S. Beer Industry, an industry that sells more than 196 million barrels of beer annually and includes more than 3,000 breweries and employs 2 million:

- Almost 8% of all beer produced in the United States is now Craft Beer
- That's double from just six years ago, with no signs of this trend slowing
- Craft Beer sales grew 18% last year while overall U.S. beer sales were down about 2%

Needless to say, Craft Beer has achieved new purchasing clout. And craft brewers, who are passionate about their craft and the ingredients they use, are anxious to use it. Nowhere is this more apparent than within the U.S. Malt Market.

25% of American malt is used by craft beer

Even though Craft Beer represents only 8% of total U.S. beer production, it consumes 25% of U.S. malt. This can be attributed to a combination of declining overall U.S. beer sales and the growth of Craft Beer, which uses more malt per barrel of beer produced than domestic lagers.

Craft beer is all-malt beer, brewed almost exclusively from four ingredients—malt, hops, yeast and water. Typically 70 pounds of malt is used to produce one barrel of craft beer. Domestic lager is adjunct beer, brewed using about 24 pounds of malt per barrel supplemented with large quantities of adjuncts (i.e., rice, corn, sugar). Adjuncts help produce very light colored and flavored beers.

Craft giving AMBA a new face

To influence the development of new barley varieties, Craft Beer is turning to the American Malting Barley Association which leads malting barley research and breeding in the United States. Briess began actively supporting U.S. malting barley variety development in 1982, when it became a founding member of AMBA. Membership is open to malsters, brewers, distillers and food companies, and since its founding AMBA has funded millions of dollars of barley research through membership dues.

"There is now a tremendous amount of craft brewers representing regional and small craft brewers in AMBA. The face of AMBA has changed," Kuske noted.

Kuske sits on the AMBA subcommittee that decides which new malting barley varieties advance from barley breeder to an AMBA-recommended malting barley variety. AMBA-recommended varieties are preferred by growers because of the crop insurance benefits they offer as well as a multi-year selection process that rigorously investigates agronomic benefits of potentially new varieties.

"I used to be the lone voice on the committee speaking on behalf of Craft Beer," he said. "But now Craft Beer is 25% of the malt market." And his isn't the only voice in AMBA advocating for craft beer. As a result, in the past five years, several craft beer-friendly malting varieties received AMBA's nod to advance to research. And AMBA recently published new guidelines for breeding new malting varieties for all-malt beer.

From producer to end user

This year AMBA membership includes almost 50 craft breweries and distilleries. "Members like Sierra Ne-
Order Carabrown® now ... and any time of the year

In response to customer requests, Carabrown® Malt is moving from a seasonal Briess malt to a standard malt available year round. Carabrown® Malt was developed on the light side of the brown malt style in order to retain some residual sweetness while still delivering an assortment of lightly toasted flavors. At 55°Lovibond, its overall malt character is exceptionally smooth and clean tasting. Carabrown® Malt begins with a slightly sweet malty flavor before contributing toasted flavors, then finishing clean and somewhat dry. This versatile malt will add flavor, complexity and color to many styles. Use it in smaller amounts in bitter, pale, mild and Belgian Ales, wheat beers, bock, Oktoberfest, and Scotch Ales for flavor, complexity and color. Use at higher rates in Brown Ales, Porters and Stouts.

Suggested usage rates are up to 10% for subdued sweet malty, lightly toasted flavors and light brown/orange color contributions; 10-15% for smooth, more accentuated toasted, biscuity, nutty, graham cracker flavors and slightly dry finish; 15-25% for more pronounced yet smooth toasted, biscuity, nutty; graham cracker flavors and slightly dry finish. Contact your distributor or Briess Division Manager for a sample, or email info@brewingwithbriess.com.

American malts for German bier

By Rich Ellis
Briess Division Manager-East

Germany is steeped in rich beer culture and history. From Weiherstephan — the oldest brewery in the world founded in 1040, to Reinheitsgebot — the Bavarian purity law of 1516, Munich’s Oktoberfest and the famous hop region of Hallertau, Germans enjoy a beer centric culture. Having the ability to brew a wide variety of German beer styles at your brewery with fresh American malt allows you to deliver the great tastes of Germany without the long tiring boat ride that German produced beers must endure.

German Pilsner

This is a classic example of German lager brewing. This is a very delicate balance of malt and hops. Light straw color is best achieved with a very light base malt such as Briess Pilsen Malt (1.2° Lovibond). Its clean, delicate malty flavor is the perfect complement to the noble hops that are the signature of this beer.

Münchner Helles

If you absolutely had to categorize one German beer as a session beer, Helles would be the one. Helles means light in German. This golden lager relies on a strong malt foundation for its unique flavor. The rich malty flavors found in Briess Goldpils® Vienna (3.5° Lovibond) make it the perfect base for this beer.

What Munich-based beer would be complete without Munich malt? Briess offers two types of two row-based Munich’s, Bonlander® Munich Malt (10° Lovibond), and Aromatic (20° Lovibond) provide the intense maltiness, as well as providing the rich golden hue of this delicious German lager.

Schwarzbier

Schwarz is German for black. Long before black IPAs were the rage, Germans were enjoying this delicious black lager. The secret to a good Schwarzbier is achieving the black color and bright white foam without incorporating the astringent bitterness that is associated with dark roasted malts.

The solution to this is Briess Blackprinz® Malt (500° Lovibond). This malt is derived from huskless barley. Since this malt has never been associated with a husk, the astringent flavor is nonexistent. This allows you to brew a black very drinkable water that your customers will enjoy.

This is a small sampling of German beer, and the wide variety of malt types that Briess can offer to master these styles. A German lager beer provides a unique and special offering for your customers to enjoy, and when made with fresh American malt it becomes even more special.

Malt of the Month: Ashburne® Mild

From BrewBlog — to read more Malt of the Month stories and other news, visit www.brewingwithbriess.com/blog

One way to add distinguishing flavor to lighter flavored beers is to use a unique specialty base malt. I recommend you try Ashburne® Mild Malt. At 5.3° Lovibond and DP 68, this 2-Row malt is slightly darker with a higher dextrin level than Briess Pale Ale Malt, and lends a higher residual maltiness/mouthfeel to the finished beer. It has a really nice, interesting flavor profile—slightly malty, sweet with a subtle toasty flavor.

Ashburne was developed in the early 1990s as a custom malt for Old Dominion Brewing Co. in Ashburn, VA. An “e” was added when naming the malt, which eventually rolled out to the whole brewing community.

I used Ashburne® Mild as the base malt in El Chupacabra Barley Wine, as I had some left over from our seasonal Hoptoberfest brews. With a beautiful orange/amber color, this beer isn’t too cloying due to the addition of the honey which also adds a great floral nose. I brewed this R&D beer on the 3 1/2 BBL “pilot” brewery I was using at the time. This beer was outstanding and served at the barley wine festival held at Dunedin Brewery in 2002! And if you don’t know about El Chupacabra you can learn about it here.

You’ll see on the recipe that I just sprinkled a few specialty malts in for flavor so as not to overpower the Ashburne. I recommend you do the same. Try dashes of Caramel, Munich, Biscuit or even Midnight Wheat or Blackprinz® Malt for big color and a touch of roasted flavor.

-By Dave Richter

Malt Report 3—

From Page 2

vada, New Belgium. Bell’s Brewery, New Glarus and Oskar Blues are getting actively involved in the organization and the process,” Kuske said.

Any AMBA member can recommend that a new variety advance from breeder to recommended variety.

“But Briess is looking at the supply chain from beginning to end. If an end user requests a certain variety be advanced and is willing to support it, we are willing to try to make that happen. But it has to be a win for both the grower and the brewhouse.

“For example, we would learn what volume the end user needs and then bring that information back to the grower. We will liaison between the grower and the user, and the grower will be an active participant in this process.” Bringing a viable variety to the grower is critical, Kuske continued, citing a dwarf malting barley variety in development that shows potential as a high yielding, less susceptible to lodging, and is drawing a lot of attention from Craft Brewers for its superior flavor.

“Agronomics is always center to developing a new variety,” Kuske continued.

“Our goal is to promote new varieties with increased yield, disease resistance, improved plant height, stronger straw, less lodging, all the things that make for better selection rates and increased ROI for our growers, as well as broad acceptance by the Craft Brewers for flavor and brewhouse performance – a true win-win!”
Letters from the President

Chris White

Chris White is President of White Labs Inc. He has a Ph.D. in biochemistry from the University of California, San Diego. Feel free to write him at cwhite@whitelabs.com about this column.

Name change for WLP500 Trappist Ale Yeast

White Labs is changing the name of a yeast strain that dates back to the early days of the company. The strain long known as WLP500 Trappist Ale Yeast is being changed in recognition of the trademark that exists for the “Trappist” name.

To come up with a new name, White Labs held a contest on social media, inviting ideas from fans. Nearly 200 ideas came from all over the world, ranging from the absurd, to the humorous, to the thoughtful. Ideas included “Monks Know Best Ale Yeast,” “It’s Not a Trappist Ale Yeast,” and “Monks Share.”

However, White Labs went with a name entry that was more subtle and in line with the traditional name of the yeast strain. WLP500 is now Monastery Ale Yeast! The name was submitted by Chris Myers. The name is expected to be put in use in November 2014.

‘How We Make Yeast’ graphic is online

For years I have talked to my staff about the need for a graphic that shows how we make yeast.

It took a bit of time, but we now have this graphic on our website (and reproduced on the next page).

I thought this would be important because there are many procedures that go into making high-quality pure yeast, and many necessary steps, and this can be difficult to explain with text alone.

There are good reasons why we take a long time to make yeast for our customers, with the short answer being that we believe a long process ensures a better brewing experience with more generations. The long time it takes us to make and test yeast — 17 days — is not something the customer generally sees. This is because more than half of our yeast can ship the next day as we have fresh yeast clearing QC every day.

My desire for a graphic explanation of this became more important over the past year as we introduced the FlexCell process, which involves growing and shipping the yeast in the same flexible container, minimizing handling and, we believe, ensuring better yeast.

I hope this graphic shows you how we do it.

GABF and White Labs in words and pics

A large crew from White Labs traveled to Denver, Colo., in September for the Great American Beer Festival.

They hosted booths representing White Labs and the fund-raising team it sponsors, Beer for Boobs. The booths featured a PurePitch theme with a game in which winners could earn hangover kits, bandanas, coozies, and their very own Yeastman. Additionally, White Labs and others sponsored the GABF Pro-Am Competition.

Nearly half of all GABF medal winners — more than 48 percent — are White Labs customers, with the highest percentage being gold medal winners.
The purpose of CBQ is to provide information and tips about brewing from an ingredient perspective—malt, hops and yeast. CBQ is sent each quarter to thousands of professional brewers. CBQ is sponsored by Briess Malt, Hopunion LLC and White Labs Inc.

GRAPHIC AT LEFT: Wonder what this graphic is all about at left? The short answer is that it describes how White Labs makes yeast, with the added benefit of showing how the FlexCell process integrates into the company’s procedures. To learn more, read Chris White’s column at left.

CLASSES: By the time you read this, White Labs will have concluded its years-long schedule of classes. Recent offerings included the multi-week Siebel Institute Essential Quality Control Course, as well as multiple 1- and 2-day Yeast Essential courses, which generally sold out. A new schedule for 2015 will be available by the end of this year.
Glenwood Canyon celebrated 2100th batch with a SMaSH

When Glenwood Canyon Brewing Co. decided to brew a special beer commemorating its 2100th batch, it decided to do a SMaSH beer at the recommendation of their local homebrew club, using Briess Pale Ale Malt at the recommendation of Rich Tucciarone from Briess.

Glenwood Canyon brewers Ken Jones, Chip Holland and Tom Schickling explained that the Roaring Fork High Altitude Mashers provided the idea of brewing the “single malt and single hop” recipe. “That sounded interesting to us,” reported Ken.

Ken indicated they were looking for a flavorful malt to brew something along the lines of a sessionable British or American-style Pale Ale. Since there was only going to be one malt used, he really wanted something more interesting and complex than a “generic 2-Row Base Malt,” but not something that would overpower the single hop variety they were going to select. With that in mind, Rich said he immediately suggested Briess Pale Ale Malt. “It is pleasant, bready, biscuity with slight nuttiness and provides an excellent foundation for a variety of Pale Ale interpretations,” Rich added.

“He gave us some suggestions for hop varieties, too,” he said. “We decided to use Centennial Hops from Hop Union. The idea behind it was to break down the brewing process to its basic elements by limiting our recipe to only one malt and one hop, yet still make an enjoyable beer. Obviously we had to be careful to choose the right ingredients!” Batch 2100 was released during American Craft Beer Week (May 12-18) and we are pleased to report it was a hit!

A recommended pairing is cheddar cheese Beer soup, roasted half chicken.

Batch 2100

Description: This is a special beer commemorating the 2100th brew of Glenwood Canyon Brewing Co. It is a SMaSH beer made with a “single malt and single hop” and was served during the 2014 American Craft Beer Week.

Alcohol by Volume: 5.1%
Original Extract: 12.7 Plato

By Mike White
White Labs

We would like to alert you to an impending, large-scale construction project planned at White Labs. Please help us by getting your orders in early during this period, particularly if you order private or unusual strains.

In anticipation of this work in November and December, White Labs is bumping up production in hopes of having ample supplies of commonly ordered yeast. Most yeast should be in PurePitch packaging by this time, allowing for quick turnaround times from ordering to shipping.

White Labs is building a new brewhouse and is making improvements to the clean room where the yeast is propagated in; the projects will result in higher quality yeast for customers.

During the construction times, very little yeast will be made at the main San Diego factory.

White Labs has a smaller laboratory in Davis, CA, and this lab can produce about 10 percent of the volume of the San Diego facility. Yeast can be made in Davis during the construction project, although please anticipate a few days extra time to grow the yeast.

The facility in Davis started out several years ago as an R&D lab, and the FlexCell process for propagating yeast was pioneered in this space.

For private strains and those that are not typically in production, please follow the guidelines below:

* Please place orders for private or unusual strains by Nov. 19 (dates are approximate). The next available order date for these strains will be Dec. 16. (With production ongoing in Davis, please feel free to ask us during these times for yeast if these deadlines have not been met, and White Labs will do its best to meet your needs).

This project comes during a year of rapid expansion, including the doubling of factory space. The construction of a wort brewhouse and sterilizer will allow White Labs to make yeast with a consistent supply of malt that is ideal for yeast propagation.
Behind this bag of Briess is a special story

Have you ever received a bag of Briess malted milk balls? If so, you’re already familiar with the 55 or so double-coated maltly treats inside. They’re custom-produced from our own malted milk powder and, for about 20 years, these well-recognized bags have been a signature Briess calling card to American craft brewers.

But you probably weren’t aware that, for the past 12 years, each bag has served another purpose — helping prepare individuals with intellectual and developmental disabilities for employment in the community.

“We used to have summer student employees fill the bags,” explained VP of Sales & Marketing Bob O’Connell. “But the New Hope Center had the capability to safely handle a food item, and was seeking job creation. "A client may request a certain type of work, maybe in a restaurant," she explained. SE case managers seek those types of jobs with potential employers, at the same time seeking additional job opportunities for other clients.

Then the process of preparing a client for a job begins. That frequently begins in the New Hope Center’s Commercial Fulfillment Skills Center.

“The goal of the Skills Center is to prepare individuals for community employment,” said Director of Operations Joe Weidensee. The Skills Center offers packaging, mailing and assembly services to area businesses like Briess. Filling bags with malted milk balls, packaging metal parts and screen-printing T-shirts are among the types of tasks used to teach job skills to clients.

Skills like following procedures and tracking progress to accurately weighing and measuring all help prepare clients for employment within the community. The program’s success is in the numbers. “At the present time five clients who have worked on the malted milk balls now work in the community” advised Weidensee.

In addition we have about 15 long-term placements,” said Prange, “with another 10 in active training for its employment skills center, so we moved the job of filling them over there.”

The NHC is a community-based, non-profit organization just blocks from Briess in Chilton, WI. Its mission is to inspire freedom and independence in the lives of people with disabilities, which it does by providing meaningful and quality services including residential, day programs, transportation and community employment. About 150 post-high school age individuals are served annually.

Supported Employment Manager Amy Prange explains that placing a client in community employment begins with job development. These individuals work in all types of businesses. We have one client working in a restaurant, another files for Human Services, another performs janitorial services at the tech school and one is mowing lawn and handling ground maintenance for a local church.

Job training doesn’t stop once a client leaves the Skills Center for community employment. Frequently it continues with onsite job coaching from case managers. “We’ve helped make donuts during the 1-6 am shift at a bakery. And, we used to keep a communal pair of farm boots for our job coaches when one of our clients milked cows. We do whatever it takes,” she continued.

“Through the resources of our skill center, individuals seeking to become more independent by learning lifelong skills gain the work experience they need to achieve their goals and transition into community employment.” said Development & Marketing Director Kymberly Peck.

In addition to providing employment for the Skills Center, Briess also provides community employment. Currently four clients are working in Briess production facilities, including long-term employee Jamie who performs a variety of tasks at one of the company’s grain processing plants.

“Jamie has worked here for a long time,” Insta Grains® Plant Manager Marty McIntire said. “He’s dedicated and dependable and pleasant to work with.” Jamie started working in the plant 14 years ago and fits right in with his co-workers, Marty continued. “He’s flexible and helps out wherever he’s needed. The guys like working with him because he’s easy to get along with and is a good worker.”

“Our clients just love to work,” Kymberly explained. “To them, part of having a job is being just like everyone else. It gives them a sense of pride and acceptance. Employers benefit, too. They get dedicated employees who take pride in their jobs and have been given an opportunity to be part of and give back to their communities.”

That’s the case at Briess, according to O’Connell.

“Not only do the craft brewers get excited to receive these bags of premium malted milk balls, so do we here at Briess, knowing that we are giving back to the community by supporting the New Hope Center.

“Besides being able to employ more people from our local community, we take great pride in knowing that we are able to be part of the skills development program at the New Hope Center, and are able to be an important part of their growing program,” added O’Connell.
What you will find in this issue of Craft Beer Quarterly—

- A Briess special report on developing barley varieties for the craft market, Page 1  
- White Labs unveils new name for WLP500, Page 4  
- American malts for German beers, Page 3  
- White Labs graphic on ‘How We Make Yeast,’ Page 5

**Style Matters**

ored beer using aged hops, 2-year old hops (~10IBUs), pilsen and unmalted wheat. They are traditionally spontaneously fermented and therefore have a range of micro-organisms inside them. The beer is barrel-aged for 1-3 years. Craft brewers use a variety of White Labs’ yeast, brettanomyces and bacteria cultures to recreate the flavors of traditional gueuze offerings, which are fermented with the help of local microflora and microfauna.

Joe Kurowski, White Labs Brewing and Yeast Specialist, said, “It can be difficult to mimic this system in an American brew system or homebrew without a brewhouse microflora that has been cultured for a few centuries. One could substitute unmalted wheat with flaked wheat, pitch Saccharomyces (try WLP530 Abbey Ale Yeast), WLP650 Brettanomyces Bruxellensis and WLP661 Pediococcus damnosus and WLP672 Lactobacillus brevis.

“Pitch into a barrel/carboy and wait. Patience is the key; taste every month or so. It will probably take 6+ months to make a traditional gueuze at homebrew volumes, longer for larger commercial batches. Keep temperatures lower 65-68F. Blend to achieve sourness levels desired.”

— White Labs