



Volume 11, Issue 2/Spring 2012

Tasting room is a unique experience for everyone

SAN DIEGO — White Labs Inc. is joining the ranks of its brewing customers by making its own beer — albeit in a very different kind of way.

White Labs won't use its distinct advantage of having on-site yeast and testing abilities to steal customers away from any other brewery. That is because White Labs Brewing Co. is a one-of-a-kind, experimental brewery that seeks to test its yeast strains under various brewing conditions and with different recipes. The nano brewery shares those beers at its on-site tasting room.

In a review posted in late March, the San Diego Reader reported, "It's a sleek space with a bar made from reclaimed woods, hop green walls and hanging light fixtures crafted from the very Erlenmeyer flasks that grace their lab space."

The tasting room opened March 22 at White Labs' San Diego headquarters. The full grand opening with



The tap handles at White Labs are yeast vials and the writing inside identifies which yeast is used for the beer.

expanded hours is slated for June 2012.

The beers are served on 32 taps (to be expanded to 35 with three beer engines). The beer is stored in the cold room and gets to the tasting room via pipes mounted on the ceiling and walls. The tasting room was professionally designed and built for maximum enjoyment for years to come.

There will be no White Labs Pale Ale; instead, there may be 10 different pale ales at the same time made with all the same ingredients except for the yeast. The idea is to experiment with ingredients and fermentation and brewing techniques, and the beers will change regularly as the experiments continue. While the beers will feature a variety of flavors, each one will come with a complete quality control report so that tasters can get an idea of where the flavors come from. For the opening at least, the beers

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Hops fields come to life

As winter closes and spring commences, hop fields throughout the Northwest are beginning to come to life. Hop farmers are planting rhizomes, twining the fields, and diligently preparing for another season of hop harvesting. Over the next 6 months, brewers and craft enthusiasts alike will anxiously wait for harvest and the ever-coveted fresh hop beers that are brewed.

To help inspire the production of fresh hop beers and the celebration of beer's agricultural roots, Hopunion is expanding its Green Hops program unlike never before. In 2012, brewers will be able to select from 6 different hop varieties (Amarillo®, Cascade, Centennial, Chinook, Citra® and Simcoe®), with increased

availability across all varieties.

Green Hops orders will be accepted from April 9 through July 31 for shipments in early September. Each variety will be sold in 10 lb. increments and shipped via UPS Next Day Air. By standardizing order increments and shipping methods, customers will experience increased freshness and customer service.

It is important to note that brewing with Green Hops can present several challenges in the brew house. Timing of harvest and brewing schedules, flexible recipe formulation, evaporation and shipping costs are just a few of the concerns that brewers must address before brewing a

See "Hop fields," page 7

Time to add a silo?

Whether you operate an existing brewery or are in the planning stages for a new one, the idea to add a silo has probably come up from time to time.

For more than 20 years Briess has been helping craft brewers answer that question. That's when some of today's successful craft breweries were young and experiencing their first growing pains. To help, Briess initiated a "Silo Program", a program that helped many breweries through the process of installing a silo and becoming better poised for growth.

Of course the number one reason

to install a silo is potential cost savings. As your brewery grows, improving efficiencies and containing costs becomes more and more important. But don't forget about the added benefits. The mere presence of the silo visually enhances a brewery. And a silo offers valuable marketing real estate for a colorful logo or marketing message. Bulk transfer of malt decreases not only expensive staff hours but also the potential for back injury by handling and dumping large numbers of 50-pound bags of malt. And bulk decreases the amount of recycling you

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Style Matters: Tips for double IPAs — with a homage to SD

In each issue, CBQ spotlights a particular beer style and provides tips from an ingredient and fermentation perspective. In this issue we examine double IPAs, in commemoration of the Craft Brewers Conference coming to San Diego and that city's contribution to the style.

Hop Notes:

Hop Lovers Rejoice! Imperial India Pale Ale (Imperial IPA), also known as Double IPA, is an Ameri-

can beer style that is continuing to define the craft beer industry in America. As consumers look away from bland, mass-produced lagers in search of ales with lots of flavor and aroma, Imperial IPAs are continuing to push the limits as to what is defined as quality American craft beer. Known for their bold flavors, relatively high alcohol content, extreme bitterness, and pronounced hop flavors and aromas, Imperial IPAs will showcase what American brewing is all about for decades to come.

India Pale Ales, which have been brewed since the 18th century in England, were made by adding more malt and hops to a standard pale ale recipe, which in turn would make the beer more alcoholic and bitter, allowing it to stand up to the test of time when beers were transported from Britain to India. In the 1980s, American craft brewers were making

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Briess is named a 'Patriotic Employer' by the DOD

Briess Malt & Ingredients Co. has been recognized as a "Patriotic Employer" by the Department of Defense. Army Reservist and Briess employee Leona Propson (Quality Control) nominated Briess for the award.

"The Army has several values: loyalty, duty, respect, selfless service, honor, integrity and personal courage. I see those same values with owner Monica through management to the employees who work for Briess Malt & Ingredients Co.," Leona explained after learning that her nomination was successful.

Leona, a quality control specialist employed at Briess since 1995 and an Army Reservist assigned to the 432nd Civil Affairs Battalion, Green Bay, has been deployed twice since 2000, first to Kosovo and more recently to Iraq.

The Patriotic Award is presented to companies that go above and beyond federal requirements for offering support and services to military employees. In nomi-

nating Briess for the award, Propson noted the personal support she and her family received from management and co-workers alike.

"Several people placed flags in their cubicles and on their doors the whole time I was gone. They also made a quilt and hung it in the office to show their support. I received frequent emails from co-workers, owner Monica Briess and president Gordon Lane.

"I received care packages. And when I came off of active duty, I was offered a new position within the company that was equivalent to a promotion," she wrote in the nomination.

The award recognized Briess "for contributing to national security and protecting liberty and freedom by supporting employee participation in America's National Guard and Reserve Force." It was presented by Chester McDonald of the Employer Support of the Guard and Reserve, a DOD agency.



Army Reservist and Briess employee Leona Propson received care packages, emails and support while being deployed abroad.

Leona will retire from the Army Reserves on July 1 after 30 years of service to her country. Congratulations Leona, and

thank you for your patriotism, loyalty and dedication to our great country. We appreciate it!

Silo

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need to manage.

So when is it time for a silo?

Usage

The main criteria for silo readiness is rate of usage. Suggested turnover time for grain stored in a silo (approximately 48,000 pounds) is six to eight weeks. For example, using a 20bbl system, this translates into approximately 60 brews, or two brews a day, five days a week = six weeks for complete usage.

Size

Why 48,000 pounds? We suggest a 1,900-cubic-foot silo which can hold up to approximately 60,000 pounds. This will comfortably hold one truckload (approximately 48,000 pounds) on top of a small amount of grain with sufficient head room for the 20bbl system in the above example. Does the silo need to completely empty before filling it? We suggest the opposite—a small amount of grain in the bottom of the silo acts as a cushion for incoming grain, preventing breakage. We do suggest, however, to completely empty the silo after every third to fourth fill. This helps remove any build-up of husk and chaff and helps monitor and control any potential problems.

Freight

One of the main reasons we suggest a 60,000-pound-maximum capacity silo is freight. Bulk trucks hold between 48,000 and 50,000 pounds, depending upon the type of truck and density of the grain. The freight bill, however, is based on a minimum of 48,000 pounds per shipment, even if the total is less than that. We therefore suggest that you take full truckloads whenever possible.

Silo Features

So, you fit the above criteria, now what? What features should it have? Where do you look for a suitable silo? We suggest the following features for your silo:

- The hopper should have a 45° minimum angle.
- The optimum material used for the silo itself should be smooth-sided, epoxy-coated both inside and out—or at the very least a mild steel.
- The bottom discharge opening should be between 12 inches and 14 inches.
- Install a permanently mounted ladder with a safety cage.
- Further measures should be taken to prevent unauthorized entry into the silo or surrounding area. Become familiar with confined space guidelines including federal, state and any local guidelines that may apply.
- Filling the silo/unloading the truck: We suggest that you permanently mount a four-inch line equipped with a quick-connect coupling for ease of unloading.
- Be sure the coupling and all connections are filed smooth. This can be an area that will cause a great deal of damage to grain if not smooth.
- Install an air vent equipped with a dust collecting cyclone or filter sock. If using a filter sock, we suggest that it is at working level so that a person of average height can stand on the ground to replace the sock.

Making the plunge

If you're thinking of adding a silo to your operation please contact Briess. Here were listed some of the main considerations, but there are more. Bulk transfer equipment and systems that cause the least amount of breakage to malt, bulk deliveries and ROI are all additional areas that we have a great deal of experience with. And every brewery and circumstance is different. What's right for



Not all silos are shaped alike as these acrylic models demonstrate. Talk to your silo manufacturer how this affects the flow of the malt.

one will not be right for another. We'll be happy to guide you through the process to help decide if it's time for a silo. In addition, financing may be available through the Briess Silo Program.

Purchase Briess Malts from a distributor or direct

In order to offer more flexibility in ordering, Briess sells to licensed breweries both through authorized distributors **and** also directly from our Chilton, Wis., location. Because distributors are strategically located throughout the United States, they can often offer shorter turn around on orders and possibly more attractive freight rates. Breweries fortunate enough to be located close to a distributor have the added benefit of being able to pick up their own orders.

If you are interested in purchasing direct from Briess, contact us at 800.657.0806 or write us at info@brewingwithbriess.com. We'll be happy to help determine if it's more cost effective to order direct or from one of our authorized distributors. Authorized distributors to federally licensed breweries

include:

Country Malt Group-Vancouver, WA

Toll Free: 800.496.7732
Local: 360.699.6759

Country Malt Group-Hayward, CA

Toll Free: 800.496.7732
Local: 360.699.6759

Country Malt Group-Denver, CO

Toll Free: 800.496.7732
Local: 360.699.6759

Country Malt Group-S Holland, IL

Toll Free: 866.428.1438
Local: 518.298.8900



Country Malt Group-Champlain, NY

Toll Free: 888.368.5571
Local: 518.298.8900

Country Malt Group-Hickory, NC

Toll Free: 888.569.0044
Local: 518.298.8900

Country Malt Group - Canada

Local: 604.940.9118

G.W. Kent

Tel. 734.572.1300
Fax. 734.572.0097

Larry's Brewing Supplies

Tel. 253.872.6846
Fax. 253.872.5564

Northwestern Extract Co.

Tel. 800.466.3034
Tel. 262.345.6900
Fax. 262.345.6901

Seven Bridges (organic)

Tel. 831.454.9665
Fax. 831.466.9844

Register now for third-annual Briess Malt workshop

Registration is now open for the third annual Briess Malt & Brew Workshop scheduled for Wednesday and Thursday, August 22-23, 2012, in Chilton, Wisconsin.

The two-day workshop (photos from last year are below) delivers two days of technical expertise and tours focused on the production and use of specialty malts. Workshops include malting and the art of handcrafting small batches of specialty malts, determining specialty malt usage and anticipated results, understanding a malt lot analysis, the barley market, proper malt handling and storage, milling and more. In-depth tours include the unique Briess malthouse/roasting operation and Irish Road Extract Plant/500bbl brewhouse, and a hands-on sensory

class will help participants better identify flavors contributed by specialty malts.

In addition to Briess technical staff, presentations will be given by guest speakers Matt Brynildson of Firestone Walker, Steven Pauwels of Boulevard Brewing Co. and Craig Reiners of Riverland Ag Corp.

Pre-registration is required and is limited to 40 participants currently working in a licensed commercial brewery or in a brewing-related capacity. The \$125.00 registration fee includes meals. Transportation and lodging is not included. Chilton is located about 90 miles north of Milwaukee, 35 miles south of Green Bay, and 35 miles southeast of Appleton.

Download the registration form and complete agenda at www.BrewingWithBriess.com. Contact Briess at info@BrewingWithBriess.com or 920.849.7711.



Briess Malt lot analyses available on CMG website

The Country Malt Group has added a nice feature to its website which makes malt lot analyses available to customers 24/7. To locate an analysis you will need the item number and lot number which is printed on each bag of Briess malt.

To use this feature, go to <http://countrymaltgroup.com/maltlot.asp>. When the page opens, you'll see three "Lot #" boxes to the right of the "Submit" button. Key in the item number and a list of available lot numbers is displayed in a drop down menu format. Select your lot number and the form will be populated.

Nice.

CMG's Kelly Kuehl says malt lot analysis will usually be retained for a year.

White Labs visits Mexico breweries; emerging market

On Wednesday, April 20, White Labs headed south of the border to visit several Baja California breweries.

The first stop of the White Labs crew - Chris White, Lisa White, and Kenzie Kuehnle - was with Cerveceria Tijuana.

Cerveceria TJ creates a wide variety of lager beers. The White Labs crew was treated like royalty. They drank some delicious beers straight out of the tanks and ate like kings in the pub. Kenzie loved it! (see photo).

The owner, Jose Antonio Gonzalez, and brewer, Victor Gonzalez, made good use of the visit and asked lots of questions about yeast and beer design. Lisa brought



Photos: At left, Chris White and Lisa White with Cerveceria TJ owner Jose Antonio Gonzalez and the brewmaster, Victor Gonzalez. At right, White Labs Sales Director Kenzie Kuehnle enjoys Mexico.

some White Labs t-shirts and beanies for Jose and Victor (photo). There was talk about a future beer collaboration with between Cerveceria Tijuana and White Labs.

Next on the day visit was Border Psycho Brewery. Border is a small "artesian" brewery owned and operated by Hermanos Javier and Roberto Albarran. They have a small 15 gallon brew system at present, but are expecting to increase their size to a 2 barrel brewing next month. Their lightest beer is a brown ale.

They have an Imperial Pale Ale, Porter, and Stout in their regular line-up and a seasonal Wit. They were invited to visit White Labs during the Craft Brewers Conference in May.



Lisa White earns recognition

White Labs and Vice President Lisa White were presented with the "Business Enterprise of the Year" award by the National Latina Business Women Association - San Diego Chapter. The association presented the award at its annual luncheon on Friday, Feb. 24.

The Business Enterprise of the Year award is presented to a company and its founder/owner for notable growth, innovation, and longevity in the marketplace. The following criteria are also considered:

- Longevity: over 5 years in business;
- Growth: sustained and incremental revenue and/or diversification of business enterprise;
- Leadership: An industry innovator with notable contribution(s) to community service by the company and its owner.

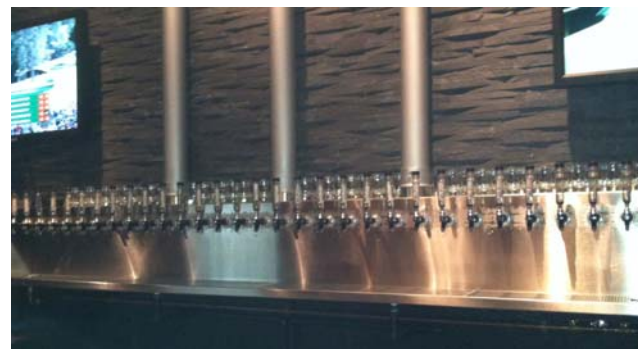
Tasting room

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were mostly brewed by Johnny Oliphant, general manager of White Labs and the former head brewer at Rock Bottom in downtown San Diego, with assistance from other White Labs employees.

White Labs will continue making beer multiple times a week on its brewing system and will share the brew — and all the accompanying data — with all beer fans who visit them.



Above, the taps are a unique contribution to the tasting room. At left, the lights are made from lab equipment and the wall colors suggest beer with the green hops shading.

Yeastbank news and notes: Candida move increases production

By Mike White

White Labs contributor

**** Expansion continues:** When White Labs moved to Candida Street in San Diego, the goal was to increase production. The building has five times the amount of production space as the old facility, and production went up immediately. However, the increase was mainly achieved with the same equipment and with more employees. In the months since the move, with expanded equipment, the potential of the new building is being realized. By March White Labs had increased production by 60 percent from last summer, when it moved. By the end of the year, the expectation is that production will have increased by 100 percent.

White Labs may have to look at expansion possibili-

ties if these trends continue.

**** Indigenous beers:** A new category at the Craft Brewers Conference awards this year (and of course other future contests) is "Indigenous Beers," and when most people think about this style, they may think of locally grown, unusual ingredients. It is supposed to recognize historical or region-specific styles that use unique ingredients or techniques. But yeast and fermentation should not be overlooked in maximizing this style. At White Labs, we plan on experimenting with yeast strains to create Indigenous Beers, which we will pour in our tasting room. This way we can give better advice to brewers about creating a style with unusual yeast or fermentation practices. We probably won't have samples on tap for CBC, but we will try. Another avenue of experimen-

tion for us will be to find the best strains for use with beers that are not made with hops, as these beers present special challenges when it comes to combating spoilage.

**** Yeastman update:** Yeastman, White Labs' proprietary tracking, reporting and ordering technology, will undergo numerous updates in 2012. It is in bad need of a graphic upgrade, as is the case with our main White Labs website. Additionally we want to increase speed with which people can find what they need and process their orders. One of the goals was to answer our customers' number one question — "When can I get my yeast?" — in seconds instead of possibly hours. And it does so. The system knows what has already cleared QC, and the

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White Labs opens its doors for brewers at the CBC

As the Craft Brewers Conference comes to San Diego, it is worth considering this city's place in the world of beer. It is one of a handful of places in the United States that has strong ties to craft beer's early history, and today it plays a big role in what people nationally and internationally choose to drink.

When I moved to San Diego in 1991 for graduate school, beer was not the first thing on my mind. I had years of study ahead of me, but I also wanted to pursue my homebrew hobby. I was fortunate to meet people who would help me in my future career. I became friends with some of the pioneers of craft beer, and soon I began using my lab and yeast training to propagate yeast for these brewing friends.

Vinnie Cilurzo, now owner and brewmaster at Russian River, was an early customer when he owned a brewery in Temecula, north of San Diego. He is often credited with "inventing" the double IPA style. That is part of what makes the San Diego area special in the world of



Letter from
the President
Chris White

also is known as the West Coast style, combines hops and other factors. It is pale in color, with strong hops, making it very drinkable. It is similar to a Belgian Tripel, except that instead of being pale with yeast character, these beers are pale with strong hop character. Among other achievements, San Diego brewers helped fuel the trend toward pale, drinkable and hop-forward beers, creating perhaps a new definition for "balanced beers."

beer, and double IPAs are a staple far beyond San Diego. But I think San Diego has a less obvious but more wide-ranging impact on beer.

The San Diego style, or what

As craft breweries open up around the world, more and more are trying to emulate the hop-forward, i.e. San Diego style. brewers will have a lot to learn from each other when they gather for the CBC.

As for White Labs, did we help in this trend? I think having a yeast bank and laboratory close by had a part to play in the area's prominent position in beer, both past and present. But the reality is that today our yeast is available to someone in Utah or Maine in the same time frame (next day shipping) and close to the same costs as their fellow brewers in San Diego. Indeed, half of White Labs yeast goes east of the Mississippi.

So it's no small wonder that a lot of the country, and beyond, remind me of a double IPA in San Diego.

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.

From the Lab

QC Day another splash

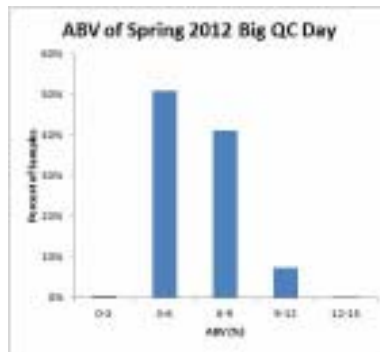
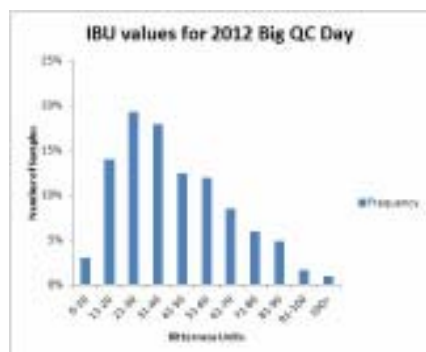
Big QC Day results went out at the end of March — two weeks earlier than expected and faster than during any past testing marathon. This was due to more samples arriving at the cut off time, extra help in the lab, and other internal factors.

The results probably could have actually been out a week earlier given the speed, completeness and lack of any questionable numbers. White Labs used new flexible autoclavable bottles, which eliminated the few cases in the past where leaking bottles were reported.

Customers are also getting a handle on how to get their results from Yeastman.com, White Labs' tracking, reporting and ordering technology. Further upgrades are under way, including uploading all past Big QC Day testing into customer accounts and to provide historical comparisons and charting.



Watch out for the 2012 Fall Edition Big QC Day! ... This is the second year in a row that the testing program has an encore edition



White Labs Tasting Room hours, special during CBC week only — 12-8 every day (except Friday's private party)

Craft Beer Quarterly

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.

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Brewing on the dark side: Pizza Port and CBC

Brewery creates a new recipe for the conference

In celebration of Southern California's phenomenal beer scene and in honor of the Craft Brewer's Conference, Pizza Port San Clemente is brewing up a new recipe to be featured at the Craft Brewer's Conference at beer station #324 (sponsored by the Craft Beer Quarterly).

Created by head brewer Ryan Fields, this specialty brew, "Goodbye Blue Sky," is a Cascadian Dark Ale featuring Midnight Wheat Bitterless Black Malt from Briess Malt and Ingredients Co., Cascade, Columbus, Centennial and Simcoe® hops from Hopunion LLC, and California Ale Yeast from White Labs Inc.

It is a full bodied beer with a punch of hops up front in the flavor and aroma, followed by a nice, mild, roasted character and clean finish. Inspired by Pink Floyd, Fields named the brew "Goodbye Blue Sky" to represent the transformation from Pizza Port's typically bright and clear



house tap list. Over the past 25 years, the creative efforts of each Pizza Port brewer have paid off. 2003 and 2004, began Pizza Port's golden streak, with the Solana Beach location winning Small Brew Pub of the Year and Brewer of the Year under Tomme Arthur. Next, San Clemente won gold at the Great American Beer Festival with 'Pseudo' IPA as well as Small Brewpub of the Year with head brewer Noah Regency in 2010. In 2011, Pizza Port Ocean Beach quickly followed rank as a medal winner, bringing home Small Brewpub of the Year with brewer Yiga Miyashiro and unlike any other location, Pizza Port Carlsbad currently has a three-peat of Large Brewpub of the Year wins.

Known for their hop-centric West Coast style brews, Pizza Port is the ideal set-up for brewing innovative recipes and styles. Founded with humble beginnings by brother and sister, Vince and Gina Marsaglia, Pizza Port's

breweries have grown to become some of the most notable craft breweries in the United States. Each location (Carlsbad, Ocean Beach, San Clemente and Solana Beach) embodies the quintessential relaxed California environment and is allowed creative control over the

house tap list.

During the Craft Brewer's Conference, "Goodbye Blue Sky" will join local favorites such as Sharkbite Red at each Pizza Port location. It will also be featured for the duration of the conference at Beer Station #324. Stop by to taste "Goodbye Blue Sky".

Featured hop: Australian Topaz

As the southern hemisphere's largest hop grower, Australia offers some of the most productive hop cultivars in the world. Since the 1800s, Australian hop growers at Bushy Park Estates in Tasmania and Rostrevor Hop Gardens in Victoria have offered brewers an uninterrupted supply of high quality hops with exceptional brewing characteristics.

Selected for their brewing chemistry and unique flavors, Australian varieties are creating a niche within the craft beer market worldwide. Their characteristics are clean on the palate and infused with bold

flavors, making them the perfect addition to many IPA and Pale Ale styles. Although brewers are familiar with several of the aroma varieties such as Australian Galaxy, little is known about the high alpha hops such as Australian Topaz.

Australian Topaz is one of the world's best alpha acid producers, containing ideal bittering qualities. It was originally selected as a seedless triploid high alpha acid type cultivar for the production of extract, but has recently found favor with brewers for its flavor potential in single hop applications. As a flavor addition,

Topaz provides an enticing array of earthy characteristics. When used later in the boil, accompanying fruit flavors such as lychee can be detected.

Brewing values for Topaz are as follows: alpha acids 15.5 – 18.0%, beta acids 6.0 – 7.0%, co-humulone 47 – 50% and total oils 0.8 – 1.7 ml/100g.

To learn more about Australian Topaz or any Australian variety in Hopunion's Hops Downunder program, please contact your regional sales manager or a member of our knowledgeable sales staff.

Style Matters

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an IPA style of their own (American IPA) based on copious amounts of American hops utilized in late hop additions and dry hopping, and were known for their aggressive bitterness and hop flavor/aroma. In 1994, when Vinnie Cilurzo (Russian River Brewing Company) was setting up to brew his first batch of beer at the newly started Blind Pig Brewing Company in Temecula, California, some changes to the standard IPA recipe would change beer history forever. Vinnie decided that by taking an American IPA recipe and doubling the hops and adjusting the malt bill up ~30%, a Double IPA called Inaugural Ale would be the result. The brew turned out great and was the foundation for the beer style we know today. Vinnie currently showcases Pliny the Elder as his Double IPA offered from Russian River Brewing

Company. Although this beer is brewed throughout the world as an Imperial IPA, its origins are firmly rooted in the San Diego area and brewers there continue to push the boundaries of the style. For this reason, there has been a push to rename the style — "San Diego Pale Ale".

To make one of these lovely libations, adjust an American IPA recipe and boost the malt to achieve a starting gravity range of 1.070-1.090 (7.5-10% alc). This beer style is all about showcasing hops so be careful not to muddle up the flavors with different types of grain. I usually shoot for about 85-90% Pale Malt, 5% Crystal-40, and 5% Dextrin malt. Dextrose can be added up to 5% of the grain bill to boost gravity since it will ferment clean. Imperial IPAs range from golden amber to reddish copper (8-15 SRM). Imperial

IPAs are about clean malt flavors and low sweetness so a neutral yeast that attenuates well should be used.

Hop bitterness is high in order to balance the higher starting gravity and ranges from 60-100 IBU. Hop flavor and aroma is complex (citrus being the driving aroma attribute) and is a result of late kettle hopping and copious amounts of dry hopping. Although the use of English hops is acceptable, American cultivars like Amarillo® VGXP01, Simcoe® YCR 14 cv, Citra® HBC 394 cv, Centennial, and Columbus varieties dominate due to the aggressive nature of these hops compared to their English counterparts. Think of this beer as a hop delivery system to the body; go big and load in hops where you

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HopGear

Whether you are a fan of the classic green trucker hat or just looking for more information on hop varieties via the Hop Variety Handbook, www.hopgear.com is the site to locate all of Hopunion's merchandise.

Since March 2012, Hopunion has been offering craft and home brewers alike, access to all of its swag and informational material through HopGear, an online only, e-commerce store.

To date, items include:

- * The Hop Variety Handbook;
- * Hopunion's infamous trucker hats;
- * Handmade burlap banners;
- * A variety of 100% recyclable water bottles;
- * And the entire collection of Hopunion apparel, including Falconer's Flight® t-shirts and hoodies.

To learn more about HopGear, visit — www.hopgear.com.

Experience tomorrow's hops today

With the micro industry growing at unprecedented rates and craft brewers clamoring for new cultivars, it is increasingly important for Hopunion to supply a vast array of cutting edge hops to the craft community. We are in an era of IPA and Pale Ale dominance, demanding varieties such as Citra® and Simcoe®, however one has to ask, "What does the future of fermentation hold?"

With the future of craft brewing in sight and the experience of developing highly coveted proprietary varieties, no one is better suited to answer that question than The Hop Breeding Company of Yakima, Washington.

In 2002, the Hop Breeding Company was formed by a joint venture between the breeding programs of John I. Haas and Select Botanicals Group, LLC, with the goal of producing superior hop varieties with maximum efficiency. The pairing of these programs represents over

40 years of hop breeding experience for all segments of the brewing industry and capitalizes on the creative force of two of the best hop breeding programs. As evidence of their success, Select Botanicals Group, as part of the Hop Breeding Company, has developed numerous breakthrough varieties (including Palisade®, Simcoe®, Ahtanum™, Citra® and Warrior®). These varieties have not only succeeded in the industry; they have transcended all expectations and perceived brewing applications.

Moving forward, The Hop Breeding Company, along with Hopunion hopes to continue this success by providing an increased selection of cutting edge culti-



vars to the craft community through "X-Hops," a new experimental hops program designed to bring innovative brewers new and unique aromatic hops for their ground breaking brews.

X-Hops 2011 features HBC 342, a high alpha aroma variety bred by The Hop Breeding Company and selected for its high alpha, pleasant aroma and late maturity. Despite its high alpha levels, brewers have responded favorably to HBC 342's aromatic qualities, describing the aroma as mild, pleasant, citrusy and watermelon.

As a participant in Hopunion's X-Hops program, brewers have the opportunity to sample enticing varieties and provide valuable feedback to The Hop Breeding Company. Unlike ever before, brewers of any size and style have a voice in the future of hop varieties.

In any given year, The Hop Breeding Company produces 50 new crosses. 25,000 genotypes are screened for HPM,

10,000 genotypes are planted to the field, 3,000 genotypes are on tall trellis year 1, 3,000 genotypes are on tall trellis year 2, 3,000 genotypes are on tall trellis year 3 and 20 genotypes advanced to 70-plant test.

Through a strict process of screening and selection, only a few elite varieties make it to the point of substantial production. This is where brewers become paramount in determining which varieties survive to complete commercialization.

Hopunion is proud to play a role in the production of new hop varieties and welcomes brewers to participate in the process through X-Hops.

Production of experimental hops is extremely limited, however, for 2012 and beyond, X-hops will continue to offer brewers an increased selection of potential hop varieties. To participate in the X-Hops program, please contact a member of our knowledge sales staff.

Style Matters 2

From Page 3

can! I focus on a couple bitterness additions to get IBUs where I want them and then I load up on hops at flame-out, whirlpool, hop back, and make sure to save a bunch for dry hopping.

— Will Harrison, Interior Northwest Sales Manager, Hopunion LLC

Yeast and Fermentation Notes:

Whatever this style is called — officially, Imperial IPA, and unofficially Double IPA or to some, San Diego Pale Ale — these beers can be found across the globe these days, but they of course share certain characteristics, the main one being a showcase for hops. With fermentation you will want to use a clean, neutral yeast that accentuates hops, such as WLP001 California Ale Yeast or WLP090 San Diego Super Yeast. In testing beers during last year's Big QC Day, results tell us a lot about how people are making this beer. In the first year of Big QC Day, a detailed report on results showed that IBUs for Double IPAs was tested at 69; IPAs, 56; and Pale Ales, 33. Aggressively hopped beers (pale ales, IPAs and double IPAs) made up one-third of the test group, and these numbers have been consistent over the years. (Read Chris White's column on Page 5 for more on this topic).

— White Labs

Malt Notes:

While malt is traditionally revered as the soul of most beers, we hand that esteemed term of endearment over to our friends at Hopunion when it comes to Imperial or Double IPAs. Thanks to San Diego brewers who years ago boldly went where few brewers had gone before with hops, the San Diego style Imperial IPA is characterized by prominent to intense hop aroma and flavor. In fact, BJCP style guidelines refer to the "high to absurdly high hop bitterness" of Imperial IPAs.

But BJCP guidelines go on to say that "the malt backbone will generally support the strong hop charac-

ter and provide the best balance." It's like the old saying that "a building is only as good as its foundation." Which is why grist bills for Imperial IPAs need to be given the same careful attention and thought as any beer you brew, and the quality of the malt will make or break it.

When building a grist bill for an Imperial IPA, think big due to the elevated alcohol content of this style, which is often above 7.5% by volume. Guidelines recommend shooting for an original specific gravity of 1.070 - 1.090. In an all malt brew this would result in a body more similar to barley wine than a crisp drinkable beer, which is characteristic of Imperial IPA. As a result, we recommend using a highly fermentable sugar to obtain drinkability up to 20% of the original gravity.

Also characteristic of this style is a malty background which is most commonly achieved through the use of Pale Ale and Munich Malts with the addition of Caramel Malt. The malty flavor from the Pale Ale and Munich Malts along with the sweetness of Caramel Malt helps to balance the hop character.

Imperial IPAs are characterized by colors ranging from golden amber to orange hues to medium reddish copper. Some tips to keep in mind when formulating an Impe-

rial IPA include:

- Pale Ale base malt, which is an excellent choice for Imperial IPA because it has a strong malt character.
- Munich Malts help support the malt character. Bonlander®, Munich 10, Aromatic or Munich 20 are the go-to Munich malts from Briess.
- Using lighter colored Caramel Malts (20-60° Lovibond) allows for a higher usage rate to obtain your desired color.
- Using more intensely colored Caramel Malts above 60° Lovibond allows for a lower usage rate to obtain your desired color.
- Higher usage of Caramel Malt builds viscosity, mouthfeel and sweetness. It also contributes more richness to the beer and slightly burnt sugar, raisiny and prune flavors.
- Lower usage of Caramel Malt will result in a crisper beer.

Because there is a great deal of variety in hopping rates and hop characteristics of Imperial IPAs, you'll enjoy experimenting with a variety of Caramel Malts to achieve the flavor you desire.

— Briess Malt & Ingredients Co.

Hop fields

From Page 1

fresh hop beer. To learn more about Green Hops or to download an order request form, please visit www.hopunion.com or e-mail greenhops@hopunion.com.





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Attention brewer

Craft Beer Quarterly

The Back Page

Yeastbank

From Page 4

lots that are scheduled to clear QC in the future. This is important because we make yeast for custom orders as well as expected orders. Thus most of our yeast is available for quick shipping without compromising at all on our propagation and testing protocols. However, when people use the system, they do not regularly check the availability calendar before they click through to an order, making it perhaps less important to show the availability for all strains on the same page. One way to speed things up will be to give the brewer the ability to pick what strains they are interested in ordering, and showing the availability and other details for those strains only. We will keep you up to date on our progress.

**** Nano yeast:** The nano sizes we introduced this year are selling well. This is the first time we labeled a yeast to a specific group of people rather than a sizes. For in-

stance. Instead of saying that it is a 3/4 of a pitchable barrel, we identify the yeast simply as nano. Other sizes may be suitable for nanos such as 1 and 3 pitchable bbls, but calling the product a nano is important because we created this size specifically for brewers not large enough to order a regular size, but who want the same kind of assurances that comes from buying professional pitches, such as a Certificate of Quality for each batch. For larger brewers, it could also be used to test beers in smaller batches.

**** Website changes ahead:** As discussed last is-

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sue, White Labs starting updating its main Website last year, but the project ran into difficulties. We are talking to several folks at the present about restarting the process, and may have some samples to share at the Craft Brewers Conference. Come by our booth and check it out.

WHITE LABS PRESENTS

TUESDAY, MAY 1st, 2012

PRE-CRAFT BREWER'S CONFERENCE

YEAST ESSENTIALS WORKSHOP

- Yeast Metabolism and Nutrition
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A sampling of current and future ads from White Labs. The yeast workshop is sold out, but others will follow!

"X" MARKS the SPOT in SEATTLE

JUNE 21-23, 2012

Join White Labs at the National Homebrewers Conference as they reveal their new yeast strain "X." Come discover this little treasure.

WHITE LABS PURE YEAST AND FERMENTATION

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