



Volume 5, Issue 1/Winter 2006

Hit hard by Katrina, homebrewers recover

Clubs struggle to get back on track after storms

By Mike White
White Labs

In the wake of Hurricane Katrina, lives were disrupted and, in many cases, left in ruins. In the world of beer, hobbyists and professionals encountered some of the greatest challenges of their lives, although these of course

were far less significant than other life-and-death matters.

In the wake of the disaster, White Labs supplied yeast to those who for good reason could no longer acquire supplies through local stores.

Peter Caddo of Crescent City Homebrewers was one such homebrewer.

Turn to pages 4-5 for more news on White Labs, as well yeast tips.

His club met for years at the Deuches Haus on Galves Street, New Orleans. The building took on five feet of water during the storm, and the neighborhood for miles
See "Katrina," page 4

Water conditions improve for hops

By Ralph Woodall
Hopunion CBS

Heavier than normal rain patterns hit the Pacific Northwest in December and January and have added some "heavy" snow pack to the Cascade Mountains, which is good news on the water front this year.

The Yakima Valley rallied and finished the year with above average rain fall of over eight inches and started the New Year above average. Oregon hop growers also experienced above average moisture these past two months. The drought fears of last year are far behind us now and as mentioned our real concerns are the second year of a water short period.

Turn to pages 6-7 for more news about hops and Hopunion CBS.

This year's early rain fall and heavy mountain snow pack have helped to dispel rumors of another drought in 2006. Things are looking good so far but official reports do not usually occur until the March 1st Water Survey Report is released. More on the water supply in the next issue.

In a water shortage year, some growers have senior water rights which gives

them 100% allotments of water. Other growers have junior water rights so receive allotment percentages based on the total supply. Hop growers for the most part are used to having periodic droughts and most have some type of backup system for their water needs.

Drip line irrigation has added to water usage efficiency; deep wells as well as water sharing is available to some growers. Also, the US hop acreage is significantly lower then it was some 20 years ago. As some of you are aware we have experienced dry condition every few years and have always gotten hops to sell during

See "Water conditions" page 8

New Canadian malting barley variety: Kendall

By Bill Ladish
Cargill Malt,
Specialty Products Group

In a previous article we discussed the drop in acres planted to *Harrington* in Canada during the mid- to late-1990s and afterwards, after a long and distinguished reign in international commerce. The declines were driven by the comparatively improved agronomics of newer lines of crops that compete with malting barley for acreage in Canada, and by the improved agronomics of newer 2-row malting barley varieties released in order to keep malting barley competitive with these other crops.

The newer 2-row malting barley varieties are primarily *Metcalfé*, *Kendall*, *Stratus*, and *Copeland*. *Metcalfé*, the apparent winner in the derby to replace *Harrington* acreage, was discussed previously. *Stratus* has not been successful in the marketplace as compared to *Metcalfé* and *Kendall*. *Copeland* is newer and will be discussed in a third article. In this article we focus on *Kendall*.

Kendall was developed at the Crop Development Centre at the University of Saskatchewan in Saskatoon by Dr. Bryan Harvey. It was registered in Canada in 1995. Its parentage is *Manley/SM85221*.

The agronomic yield of *Kendall* is

about 108% of that of *Harrington*. This improvement is driven largely by better disease resistance and lodging resistance. Both *Metcalfé* and *Kendall* are superior to *Harrington* in resistance to net blotch and stem rust. However, *Kendall* has resistance to loose smut and other smuts equivalent to that of *Harrington*, whereas *Metcalfé* has improved resistance.

Comparisons of malt analytical data across varieties have to be done with great care. Typically maltsters have to work with a variety for a while to optimize processing conditions. When that is completed, different varieties tend to be selected for

See "Kendall," page 2

Style Matters: Barley Wine

In each issue, CBQ spotlights a particular beer style and provide tips from an ingredient and fermentation perspective. In this issue we take a closer look at Barley Wine.

Hop Notes: Ah Barley Wine! The biggest, most alcoholic beer brewed — and one of the most rewarding for the brewer.

One of the major challenges for the style is the production of a high gravity wort, loaded with sugars the yeast can ferment into the warming alcohol Barley Wines are known for. When choosing the base malt for the production of these worts we would suggest taking two factors into consideration: the overall flavor of the malt, and your brewhouse capabilities.

First consider the flavor of the base malt. Barley Wines are very big beers using a higher ratio of malt than any other style. The base malt you choose will have a large impact on the beer's flavor. Also keep in mind the abilities of your mash and lauter vessels. A large grain bill, combined with an underperforming

See "Barley Wine," page 5

Cargill profile: head maltster of Warminster

Name: Chris Garratt

Title: Head Maltster

Company Information: Warminster Maltings, 39 Pound Street, Warminster, Wiltshire BA12 8NN, UK.

Where is Warminster located?

Dating from Saxon times and surrounded by earthworks and barrow mounds, evidence of earlier times, Warminster lies south west of Salisbury Plain. At the head of the Wylde Valley, an area of 'Outstanding Natural Beauty', Warminster is only 20 miles from the wonderful 5000-year-old Stonehenge and only half an hour's drive from the Cities of Salisbury and Bath in the South of England.

Tell us the history of Warminster?

The town of Warminster had a celebrated corn market until the late 19th century and had a large trade in malting, and in 1720 there were 36 malt houses in the town. Of great interest to me is the fact that the earliest Maltster known to have worked in Warminster is Henry Garratt in 1554.

The Warminster brewing family Morgan built our Warminster Maltings in Pound Street in the 1840's and it was remodelled in 1879. It was however just one year earlier however that history would start to be made at Warminster Maltings as it was in 1878 that a young farmer's son by the name of Edwin Sloper Beaven, was first initiated into the practice of buying grain and the art of

malting.

Tell us more about Edwin Sloper Beaven.

Beaven took a great interest in the selection and breeding of barley. He together with the Head Brewer at Guinness, Dublin, developed unique breeding methods and in 1905 was successful in breeding the very first genetically true variety of English Malting Barley called Plumage Archer. So important was this variety to both the farming and brewing industry that it was not until 1952 that it was crossed with another variety to produce Proctor. Proctor was the mainstay variety for the industry until in the mid 1960's it was crossed to produce 'MARIS OTTER'.

Beaven received an Honorary doctorate from Cambridge University for his outstanding contribution to the industry and after his death in 1941, Guinness formed the subsidiary Company called E.S.Beaven(Maltings)Ltd, and continued malting at Pound Street.

What do you believe makes Maris Otter unique?

We contract the production of all of our Maris Otter with the leading farmers in England and it is Quality Assured to a very exacting specification. It is because of its continued outstanding performance in the brew-house, together with the unique malty taste that it brings to the finished product that our brewer customers de-

mand it.

It is out yielded in both the field and the brew-house by more modern varieties, but when has quality ever been measured by quantity alone? When a connoisseur of fine ales is savouring his delicious pint, they will be appreciating just one thing above all others. The TASTE!

Warminster is a Traditional Floor Malting. What do you believe makes Floor malting unique?

The art of Floor Malting has changed very little over the centuries and at Warminster we continue to use the knowledge and skills that have been handed down through the centuries.

Unlike in some modern maltings, where the malting



See "Malt profile" page 3

Kendall

From Page 1

different major customers and processed differently. So, while great amounts of data are available, there is only limited data available when all varieties are processed under thoughtful generic conditions in an attempt to quantify differences across varieties.

This writer is aware of only two such studies. One was done internally at Prairie Malt Ltd (PML) in Biggar, Saskatchewan with brewing at the Great Western brewpub in Saskatoon, using 1999 crop barley. The other is an extensive study done by our former colleague, Dr. Yueshu Li, and his colleague, Aleksandar Egi, at the Canadian Malting Barley Technical Centre in Winnipeg. They used barley from the 1999, 2000, and 2001 crops. This latter study has been published. Li & Egi: "New Canadian Malting Barley Varieties and Their Malting and Brewing Characteristics," Master Brewers Technical Quarterly, volume 41, number 2, (2004) pages 104-110.

In discussing *Metcalfe* previously we used PML data. Here, the chart to the right, we present the pilot-scale data of Li & Egi. In general, the important data relationships are similar to those observed at PML.

The data represent the average analy-

	Metcalfe	Kendall	Harrington
Friability, %	89.7	93	84.5
Extract, fine, dry, %	80.7	81.1	79.9
F-C Extract, dry, %	0.5	0.7	1.4
Total Protein, dry, %	12.5	12.2	12.4
Soluble Protein, dry, %	5.2	5.2	5.3
S/T (Kolbach Index), %	42.3	42.4	42.6
a-Amylase, DU	66	59	58.2
Diastatic Power, Lintner	159	157	137
B-Glucan, ppm	82	74	164
Wort Viscosity, cP	1.46	1.46	1.5
Wort Color, Lovibond	2.24	2.1	2.13
Free Amino Nitrogen, mg/L	203	193	223

sis of at least eight batches. Note that the level of total protein and S/T are similar for all three varieties. For *Kendall*:

- Improved friability.
- Extract up over 1% compared to Harrington.
- Lower F-C than Harrington. Similar to *Metcalfe*.
- Higher DP than Harrington. Similar to *Metcalfe*.
- a-Amylase similar to Harrington.

Lower than *Metcalfe*.

- Sufficient levels of FAN, but lower than Harrington at similar S/T.

The pilot-scale data of both PML and Li & Egi suggest that the b-glucan content of *Kendall* is lower than that of *Metcalfe*. Subsequent processing over several years indicates that *Metcalfe* is likely lower. Nonetheless, both are exceptionally low, resulting in good brewhouse performance.

We also found the following relationships of fermentation data for *Kendall* rela-

tive to *Harrington*:

- Slightly higher percentage of fermentable sugars in wort.
- More rapid maltose utilization.
- Similar rate of Plato reduction.
- More rapid alcohol production.
- Lowest terminal VDK concentration of all varieties tested.
- Similar utilization rate of FAN.

Interestingly, data from both PML and Li & Egi suggest improved foam stability for *Kendall* relative to both *Harrington* and the other new varieties. Li & Egi used the NIBEM procedure and found a rather large difference. This difference may be mitigated by fluctuations in other brewing process variables.

At Cargill Malt, Specialty Products Group we are attracted to the lower b-glucan concentration and run-off times for *Metcalfe*, the higher extract and somewhat better foam stability of *Kendall*, and the growing popularity of both varieties with Canadian growers. Thus we construct our Cargill Two-Row base malt as a blend of both varieties. The barley is selected at PML and malted either there or at Jefferson Junction, WI.

Ask the maltster: Differences between malts

Q: I read several posts asking about the difference between crystal and caramel malt. The difference comes from the process to prepare these two kinds of malts. I want to know exactly what is the difference between kilning and roasting. Caramel is prepared by kilning green malt, right? And crystal is prepared by roasting dried malt, right? But what is kilning exactly? Besides, what is the temperature used for kilning caramel malt? It depends on the color of the malt you want, but which is the starting temperature?

A: There are three main types of specialty malts: color malts (Cargill identifies these as caramel malts), caramel malts (also known as crystal malts), and roasted malts. Color malts, which have darker wort colors and more intense flavors than brewer's malt, can be produced in a standard malt kiln, with no roasting.

Caramel malts, which are produced by drying green malt in roasters at tempera-

tures that cause saccharification, essentially have the kilning step replaced by roasting.

Roasted malts, the very dark malts, are finished malts which are further processed in roasters after kilning.

There is frequently some confusion over the words used for the first two groups, color and caramel, which are lighter specialty malts. What European brewers usually call color malts are frequently called caramel or hi-dried malts in the United States. The term "caramel" in Europe is generally reserved for malts that have undergone saccharification during their manufacture. In the United States, these malts frequently go by the name "crystal."

The group known as color malts include a wide variety of products, such as Pale Ale, Munich, Aromatic, Hi Dried, and Vienna. These malts are produced in the same kiln in which brewers malt would be produced, but by using higher tempera-

tures in the cycle, at earlier times, to develop more flavor and color.

The higher the temperature to which malt is subjected during kilning while it is still relatively high in moisture, the more color and flavor will be developed.

In producing color malts, brewer's malt will be kilned in a cycle that begins at about 63 degrees Centigrade for much of the cycle, until the malt is at approximately 10% moisture. Then it will be raised to 71 degrees for two to three hours, followed by three more hours at 85 degrees Centigrade.

In producing Caramel (Crystal) malt, the green malt is sent directly to the roaster rather than the kiln. Low heat is applied during the first part of the cycle to dry off the surface of the grain. Then the grain is subjected to higher temperatures to maximize the activity of the enzymes in the kernel.

After saccharification, the malt is dried

to 5% or 6% moisture with higher temperatures. The temperatures may be anywhere from 80 degrees C to 145 degrees C. Colors and flavors are developed during this phase in a way similar to the color malts.

Roasted malts are produced by taking finished malts and further processing them in a roaster. In the roaster the product is subjected to very high temperatures, gradually increasing through the process, as high as 220 to 230 degrees Centigrade. The higher the temperatures, or the longer that the product is exposed to high temperatures, the darker or more carbonized the malt will be.

Have questions about malt, barley or brewing? Get them answered by our staff of Maltsters/Brewers. Just visit our web site www.specialtymalt.com and the Ask the Maltster section. We will post questions in CBQ.

Malt profile

From Page 2

is carried out in maybe only one or two very large vessels, in floor malting there are three separate stages. Steeping, germination and kilning and at Warminster the batch size is just 10 tonnes. We give each batch individual attention and can tailor our techniques according to the requirements of each batch. But the main difference between floor malting and modern methods, is of course the germination on floors.

Unlike in a pneumatic maltings, where air is forced through the germinating barley, in floor malting the barley is allowed to germinate at its own rate and we turn and plough the green-malt to ensure evenness. Because the batches are small and are attended to on an individual basis, our naturally produced malt will have a true character that will come out in the finished product.

Tell us about your organic malts:

-How do you source the barley?

Our organic barley is grown under contract and we have chosen a spring sown variety called Cellar. Most of our farmers are on the Cotswolds, Oxfordshire and Gloucestershire. The variety has performed very well for both grower and brewer.

-What certification do you have?

We are licensed with the Soil Association and our malt meets the required standard for compliance to the USDA National Organic Programme (NOP).

-What do you do differently in the production of the malt?

We have dedicated organic storage and production and can guarantee that there is no cross contamination between batches. Our organic malt is made using the same age-old techniques and

we do not use any pesticides or chemicals.

-How is the brewing market growing for organic malts?

Based on our sales of malt, the market for bottled organic beer is expanding ahead of the general market and there are a number of very strong organic brands in the market place. This is not only because they are organic however but also because they are great beers.

How long have you been working with Warminster?

I started my career at Warminster working in the Intake laboratory at the age of 16. After a few years training at each of our three malting sites I continued my training at the British Brewing School at Birmingham. I am in my 31st year and still learning.

What do you like most about your job?

I enjoy the people in the industry and meeting brewers who are passionate about their jobs and products. I love travelling and always find people with a common interest in beer.

What is your favorite beer(s)?

Having worked for the famous stout brewery Guinness from an early age, I love stouts and porters. My favourite is 'O'Hanlons Original Port Stout'. There is no better way of accompanying a traditional 'Roast Beef' meal. I really enjoy drinking beers made with our malt. At the last count there were another 1000 to try!

Editor's Note:

For an opportunity to meet Chris Garratt, stop by the Cargill Booth at the CBC-Seattle.

WARMINSTER MALTINGS
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Floor Malted MARIS OTTER now available exclusively from
CARGILL MALT
 800-669-MALT

White Labs expands analytical, laboratory services

As the new year begins, White Labs is narrowing its focus in fermentation sciences. Without changing our main objective as a production facility, we have been and will be expanding our **analytical and laboratory services** for the brewing and winemaking industries.

Although we currently offer a wide variety of services to our customers, many are not aware that these are available. Among these are IBU and color testing, nutritional analysis, complete sample analysis and testing of yeast and finished products, identification of brewery contaminants, viability tests, ale vs. lager test, and in-house consulting with our microbiologists.

New for this upcoming year will be volatile compound analysis with our PerkinElmer **Gas Chromatograph-Headspace**. This equipment will allow us to measure the presence and quantities of ethanol, VDKs, acetaldehyde, and sulfur compounds. With this, we also

From the Lab

Neva Parker



hope to further characterize our yeast strains and detect small mutations so that we can give our customers the most complete information possible. These tests will be available mid-year.

Another new toy we will be playing around with a great deal this year will be our **pilot brewery system**. With the acquisition and trial of many new yeast strains,

we will be able to create and test beer products with potentially new strains. We will be able to determine optimal parameters for these strains and monitor their performance under variable conditions before releasing them to the public.

We are also planning various fermentation trials for in-house analysis such as same yeast at different temperatures, same yeast different starting gravities, same wort different yeasts, and similar tests.

All of us at White Labs are excited for this upcoming year and we hope to share our knowledge with you, our valued customers. Visit us at the Craft Brewers Conference for more detailed information about these services and more!

Neva Parker is lab manager for White Labs. Contact her at nparker@whitelabs.com.

White Labs news: New Colorado sales office opens

A new and more spacious White Labs sales office in Boulder, CO, provides immediate benefits to customers.

Situated strategically near the middle of the country, the office is the main call center for White Labs and its location provides a great window of opportunity for people to reach the lab whether they are located on the West Coast, East Coast or somewhere in between.

A larger Colorado sales office — the office for several years was located in nearby Niwot — has allowed White Labs to expand its staff.

The lab has added customer service staff members so that customer questions and orders will continue to be handled promptly and efficiently. Two new staff members were hired in January.

The office continues to be headed by JoAnne Carilli-

Stevenson, Sales and Marketing Manager for White Labs. The only difference is that now, she actually has an office.

The Colorado office is located at 5455 Spine Road, Mezzanine East, Boulder, CO, 80301. The telephone number is the same, as well as the fax number: 888-5-YEAST-5 (US & Canada only) or 303-530-0469 locally, and the fax is 888-693-1026 (US & Canada only) or locally, 303-530-3816.

Email us at info@whitelabs.com with any questions about our new quarters or call us at the numbers above.

Our production facility and administration office remains at its longtime location in San Diego, CA, although activities at this site are continuing to increase and staff members are finding new ways to maximize space. We will report more on this quest in a future issue.

CBC news

In other news, more than 1,300 beer industry professionals will gather in Seattle, Wash., in April to discuss brewing and the business of beer for the Craft Brewers Conference, according to the Brewers Association. White Labs personnel are taking a big role in this year's festival. We will have our booth at #121.

Please come by and talk to us about special events we have planned for this year's event, including a first-ever Dodgeball tournament.

The tournament is being played by National Dodgeball Association rules. We look forward to seeing you there.

Katrina

From Page 1

was flooded badly, Caddo told us.

In late December, Caddo, speaking for himself but not for the club, told us, "I know a lot of members were hit real bad. Myself, I did all right and so did my girlfriend. Just lack of services.

"We have yet received any first class mail, magazines and such."

He took solace by delving into the hobby he has appreciated for a long time.

"I've been brewing ales with the WLP017 Whitbread Ale Yeast and I love the flavor it gives the beer. A couple of my beers have storm-related names: Blue Roof Bitter, Slash Mark Amber and Sheetrock Stout, and they are yummy."

Given his living conditions, he had to endure more challenges than most homebrewers.

Some of the circumstances he faced actually had unexpected and not altogether unpleasant results, at least from a

hobby perspective.

"The WLP833 German Bock Lager Yeast was used to brew two beers, a Doppel bock and Rauch, both beers were aged at 35 degrees Fahrenheit for three months and then the power went off and my refrigerators died and I was away for a month.

The beer aged at 95 degrees Fahrenheit and started another fermentation; the bock got stronger and maltier like the EKV 28 (an eisbock brewed by Kulmbacher Brauerei AG in Germany) and the Smoktoberfest ended up better also. Now I know how to get that more maltier aroma and taste that the Andechs doppelbock has."

In a follow up message in early February, Caddo said he is back working in the restaurant business and that he attended a meeting with the Mystick Krewe of Brew at the Abita Brewpub recently. He reported that many members had damage to their

homes due to Katrina.

The Crescent City Homebrewers, he continued, had a X-mas meeting/party in December. Caddo said that he brought some of his beers that were aged during Katrina. As for the lagers he made with WLP833 German Bock Lager Yeast, Caddo said that after he aged the beers at 35 degrees Fahrenheit for three months (with an additional "Katrina" month at 95 degrees Fahrenheit) he purchased a new refrigerator and was able to get them back to 35 degrees Fahrenheit. He is not sure he would try to redo the experiment of turning a doppelbock into an eisbock — unless Mother Nature interferes again.

Another homebrewer, David Reeder, also of Crescent City Homebrewers, told us, "Please accept my tremendous (although a little late in delivery) thank you for your generous donation of your company's yeast during this time of transition.

"I personally have been using your strains since I began brewing nearly ten years ago and when Brew Ha Ha announced their closing I was concerned about where I would obtain supplies. Your commitment to brewers in the New Orleans area is appreciated and your partnering with Al Bourg of our group to serve as the local distributor is also a relief for filling our future needs."

White Labs appreciates the kind words, but those who went through the ordeal of the storms know better than most that it took the determination of local homebrewers to keep the hobby alive during difficult times. They deserve tremendous credit for getting their lives and their hobbies back in order. We look forward to hearing more stories of positive change in the region in months to come.

To share your stories, write to cbqmag@aol.com.

Breweries, distilleries and yeast: A shared history

The future of craft distilling in North America and around the world came into clear focus during the Bavarian Holstein Distillery 101 Workshop in Flagstaff, AZ, in November. Mogollon Brewing Company in downtown Flagstaff hosted the workshop.

The workshop provided attendees with hands-on training for entering this exciting business.

I had the privilege to speak during the conference on yeast, fermentation and enzymes, and I drew on my experience in the beer world as well as our growing business with distilleries. Our customers include many breweries that have added or are considering adding distilleries to their operations.

My talks covered such topic as yeast performance and how yeast can promote flavor. I also covered fermentation temperature, which is different in distilling than brewing.

In short, fermentation occurs faster in distilling because producers ferment at 90 degrees, which would be unconscionable in the world of brewing. If this happened in beer, it would cause unpleasant esters and fusel alcohols.

Some attendees were surprised to learn that some



Technical advice

Chris White

distillers, like some brewers and winemakers, use native yeast in their products. This is particularly evident in tequila production, where native yeast has a dramatic impact on flavor.

Distillers are becoming more educated about yeast, regardless of whether they obtain it through a laboratory or naturally.

For years, people in distilling have been told yeast does not make a difference in flavor. Practical experience tells us otherwise. A new generation of distillers has an appreciation for yeast's impact on flavor, but it is not an altogether foreign idea.

In Scotland, whiskey distillers for years used a portion of brewers yeast in their world-renowned products. This practice has declined over the years as lagers have proliferated in the U.K. and ale yeast has become less

available. (Lager yeast is more fickle than ale yeast and does not function well in such a hot fermentation). A Japanese distillery recently unveiled a study in which it linked the declining use of brewers yeast with Scottish whiskey that lacked the same complexity of year's past. Tasting panels found a fuller flavor with Scotch made with a modicum of brewers yeast. In the past, brewers yeast could make up about 30 percent of the entire yeast profile for Scotch. Perhaps, we will see a return to this fine tradition.

The use of brewers yeast is particularly attractive to the growing number of smaller distilleries. After all, do they need the industrial-like speed of ultra-hot fermentations? For smaller distilleries trying to make an impact with flavor, the answer seems simple: Use a combination of brewers yeast in your products. Let us know how it turns out and we will report the results in a future column.

Chris White is President of White Labs Inc. and is a chemistry and biochemistry lecturer at the University of California, San Diego. He has a Ph.D in biochemistry. Contact him at cwhite@whitelabs.com.

Barley Wine

From Page 2

base malt, is a recipe for stuck sparges and poor run offs – and a very long day. Steer clear of malts which are under or over modified, high in beta-glucans, or damaged. Here, more than with most other styles, a quality malt is needed.

Keeping these two factors in mind we would recommend Cargill 2 Row on the domestic side, or Pauls Pale Ale if a European base malt is preferred. Cargill 2 Row is a blend of two barley varieties, Kendall and Metcalfe, which are known for their excellent brewhouse performance and fuller flavors. Pauls Pale Ale is imported from England where it is used by many British brewers in the production of their ales. Both malts have been used successfully in the brewing of Barley Wines.

In order to develop the amber to dark colors of a Barley Wine a specialty malt will also be need. Here we would suggest "keeping it simple". Most successful representatives of the style use very few malts. On the domestic side we would suggest a mid range kilned caramel malt, particularly our Two Row Caramel 60. An excellent English alternative would be Pauls Medium Crystal (55 – 65). If a darker Barley Wine is your goal, adding a small fraction of Pauls Chocolate malt or, for a more roasted character, Pauls Black malt will add color to your beer.

— Cargill Malt

Hop Notes: The hop bitterness in this style should be assertive and the IBU

Barley Wine stats: Original gravities: 1.090-1.120; Alcohol: 8.5-12 percent; Bitterness: 50-100 IBU; Color: 12-24 SRM —Wikipedia

levels range from 60-100. It requires the use of a good strong bittering hop like Columbus, Nugget, or Chinook or even Perle or Cascade depending on the brewer's preference.

The hop aroma can be from medium (earthy aroma) to very high intensity (huge hoppiness). The hops for this would be as example Cascade, Centennial, Chinook, or Goldings. The typical standard for this style would be Sierra Nevada Brewing Co., "Bigfoot Barleywine," which won the 2005 GABF Gold Medal in this category. According to their website they are looking for a fruity bouquet, with a bitter-sweet hoppiness and an IBU of 90 and ABV of 9.6%. They use Chinook for their bittering hop and the dry hop is a combination of Chinook, Cascade and Centennial. This has been one of our favorites to appreciate and use as a starting place for expanding on their base of a well balanced beer for this strong style. For more specific hop varieties detail or beer styles please refer to the Hopunion Hop Characteristics book. If you do not have a book gives us a call.

We are in the process of updating this book again so hope to have available for the CBC in Seattle.

— Hopunion CBS

Yeast and Fermentation Notes:

Big beers demand big performance from yeast. Beers such as barley wines require a great proportion of healthy yeast. High gravity beers can accentuate esters and fusel alcohols, so you want to use a clean fermenting strain such as WLP001 California Ale Yeast, WLP060 American Ale Yeast Blend, and WLP010 10th Anniversary Blend (available through December 2006). If you are using your house yeast, consider finishing with a strain such as WLP715 Champagne or WLP730 Chardonnay; some North American breweries use this approach for bottle conditioning because these strains provide good carbonation and are tolerant of high alcohol levels.

You will want to double or triple your pitching rate because you don't want a lot of yeast growth with this beer. You will not be reusing yeast with this beer.

Ideally, when making barley wines, you will want to use the third to fifth generations of your yeast. So if you have acquired a special strain to make your barley wine, we suggest you make a lighter beer first. A good idea is to experiment using the strain with your house beer and comparing the differences in flavor.

Barley wine requires at least two weeks

of aging, but remove the yeast as soon as possible. If you do not do so the high alcohol content will cause the yeast to change character and could add unwanted cardboard-like or yeasty flavors.

Good luck!

— Chris White, White Labs

Craft Beer Quarterly

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Hop customer profile

From homebrew shop owner to the third coast's "eccentric" icon

By Ralph Woodall
Hopunion CBS

This issue's customer profile features Mr. Larry Bell, Owner/Masterbrewer of the Bell's Brewery near Comstock, Michigan. As many of you know Larry is one of the early craft brewing pioneers who made it to the top and is still there through all the years. In a recent phone interview I was able to question Larry on his brewing background and some of the things he likes about the craft brewing world and what keeps him going, and going and going....

What is your educational background? I have two years at Kalamazoo College and I am Honorary Faculty at Michigan State University as I give brewing lectures in the hospitality suite.

How did you first get into home brewing? During college I moved into a home with three other guys and we all liked to drink beer. I was working at a bakery at the time and was working with yeast and grains so the move from baking to brewing was an easy one. The first brew book I read was, "Maltese Flagon" which was actually a terrible book. The winter of 1980 was when the homebrew shop got going and eventually the brewery all just evolved from there.

What year did you start the Bell's Brewery? The brewery officially started in the September 1985 so we just celebrated our 20th year with the "Twentieth Anniversary Ale".

What are your favorite hops? Not good at superlatives and there are so many good hops out there and you can have fun with all of them. I guess it would be one I have not used before.

What are your favorite Bell's beers and why? All of them are my children and I love them all equally. I can tell you though my wife Angie loves the, "Two Hearted Ale."

What is your best selling beer? The "Oberon Ale" and we only sell it six months out of the year and still it is our number one seller.

How many states do you distribute to and what is your largest market? Ten states now mainly in the upper Midwest and our largest market is the Ann Arbor/Detroit area.

What is the strongest IBU beer you have ever brewed? There have been a few "Eccentric Ales," that I am sure have pushed the upper bounds of hop absorption at whatever level that is 200? You tell me all I know is it is hoppy.

You were judged as the First Alpha King Challenge winner back in 1999 for what beer? The "Two Hearted IPA" that has worked into one of our fastest selling beers now. Plan to tell the Centennial grower to increase the acreage as this beer is "on fire" and we need to secure some big Centennial contracts to keep up with demand.

Any hints on what made you such an icon in the industry? My ad agency. No, truthfully I must throw a good party. (I am sure many of you can remember several of them including the GABF Circus, CBC Milwaukee, Portland late nighters and numerous others).

There is a special someone that keeps your spirit glowing who she is, how you met and why she is so special? Angela has worked at the brewery for over eight years and continues to work here. She is gracious and willing to help in the places that need it the most at any particular time. She keeps me and the brewery running.

What are your favorite beers other than Bell's? There are lots of breweries I respect and enjoy all of them. For particulars Anchor, Deschutes, New Glarus come to mind. I have always enjoyed Gerry, Hair of the



Larry Bell and Ralph Woodall attended the GTMW in Madison, WI, in August 2005.

Dog, Odell and 300 others.

What is "Eccentric Day" and what was Ralph (PD) Olson doing there? It is a party we have each year at the "Eccentric Café" where you explore the deepest darkest corners of your personality and closet. This is a party where your true personality can come through. Ralph was there as our guest of honor and he was recruiting.

You can find out more about Larry and the Bell's Brewery by visiting their website at: www.bellsbeer.com or searching with key words "Bell's Beer."



Ralph Olson "pimps out" at Bell's "Eccentric Day Celebration."

Larry Bell's "Eccentric Day Celebration"

By Ralph Woodall
Hopunion CBS

It started innocently enough as a comment by Ralph to the office gals about his being the guest of honor at Larry Bell's "Eccentric Day" celebration this past December in Kalamazoo, Michigan.

Wondering what costume he should wear, it was soon determined for him, as Jennifer Stevens took on the challenge and ended up convincing Ralph the "pimp thing" was in fashion and would fit his alter ego to a "T." She immediately went online to "GoDaddy.Com;" oh no that was "PimpDaddy.Com" to get the attire

Ralph Olson was told that the "pimp thing" was in fashion; some believed it would fit his alter ego.

needed to fill the bill. From the snowcat faux fur collared long jacket and matching royal blue velour pants to his shiny black platform shoes.

These were accented with several rings, a "Big Daddy" gold chain and the mer-

maid handled cane also had a hidden flask for the "Hopenstuff" if you know what I mean.

The black furry pimp hat though was the kicker and matched with his sunglasses and new van dyke beard made him fit to be the "pampered pimp" guest of honor at any party. The photo here has Ralph as "Big Pimp Daddy Hop Dealer" with his band of "Ralph's Angles" (he needs more then one to keep him in line).

All in all he said he had a "Holacious" time at the party and planned to go as Santa Clause next year as he really got the, "Ho, Ho, Ho" thing down...

Rhizomes available in March

By Lisa Olson
RNV Enterprises

Are you thinking about Spring yet? Rhizomes sure are. With the first availability estimated to be the middle of March, that doesn't leave you a whole lot of time to get your order in for the best selection of roots. Hops are simple to maintain and add nice greenery to your yard or business. Just add dirt & water and you're ready to grow!

RNV Enterprises can supply you any of the 17 varieties we have to choose from.

All shipments will also include a growing instructional packet to help you get started.

Contact
Hopunion

CBS at 1-800-952-4873 to request an order form or to place an order over the phone. You can fax your order in at 1-800-952-4874. Or email your order to vickie.olson@hopunion.com. Just in-



clude your shipping address, billing address and how many of each variety you want. Hope to hear from you this year!

RNV Enterprises available roots and climates they grow the best in:

All Climates: Cascade, Centennial, Glacier, Horizon, Mt. Hood, Nugget & Willamette.

Dry, Hot Climates: Chinook.

Mild, Moist Climates: Fuggle, Golding, Hallertau, Liberty & Saaz.

Moderate Climates: Northern Brewer, Santiam, Sterling & Tettang.

Stories of new import hop "Czech Premiant"

By Ralph Woodall
Hopunion CBS

We are now selling this variety in both raw hop and hop pellets. At the request of Joe Petras of Bohemian Brewery & Grill in Midvale, Utah, we brought a small amount in last year and he was very pleased with the brewing results in his Czech Pilsner and Viennese Lager. Joe said; "This hop is very pleasant and non-offensive (not overwhelming) and well received by customers."

Joe is proud of brewer Geoff Fischer and the breweries 2005 medals at North American Beer Awards in Idaho Falls; winning Gold for Dortmund and Bronze for Cherney Bock and in 2004 a

Gold for Cherney Bock and Bronze for Viennese Lager. Joe is originally from the Czech Republic and has owned the Bohemian Brewery since its opening in 2002. You can read more on his beer styles at; www.bohemianbrewery.com, or key word Bohemian Brewery.

The analytical information shown here was obtained from Hop Grower Union of the Czech Republic's website. This hop has relatively high alpha content and good yield potential. It has received good reviews from Czech breweries and is used as the second hop addition due to its good alpha and aroma. Many Czech brewers are using in place of Perle for bittering and also Czech Saaz for its aroma. This

hop has a low Co-Humulone level and is noted as having a fine neutral bitterness.

Pedigree: Receives 50% of parentage from Czech Saaz, released 1986.

Aroma: mild and pleasant, Alpha Acid%: 7-9%, Beta Acid: 3-6%, Co-Humulone: 19-23%, Total Oil: 1.0-2.0 mls/100gm, Myrcene: 35-50%, Humulene: 25-35%, Caryophyllene: 7-11%, Farnesene: 0.5-3.0%

We are also getting a few other newer import varieties in to see how they work for US brewers. The list included Styrian Aurora (10% AA), Czech Sladek (7.5% AA) and Polish Marynka (10% AA). For more details on these varieties, or samples please call us at 1-800-953-4873.

Hopunion Alpha King Challenge winner announced

By Ralph Woodall
Hopunion CBS

The Seventh-Annual Alpha King Challenge was held this past October at the Falling Rock Tap House hosted by Chris Black in Denver, CO., during the GABF. This annual event is sponsored by Hopunion, American Brewers Magazine, and Three Floyd's Brewing Co. of Munster, IN who brews a 60.2 IBU "Alpha King" Pale Ale which is used as a bench mark for the challenge. The beers submitted have to have an IBU level close to 60. Beers were taste tested by a panel of 12 veteran beer judges for malt balance, aromatics, bitterness, and floral characteristics.

The 2005 AKC winner is Jeff Bagby of Oggi's Pizza & Brewing Co. in Vista, CA, for his "Torrey Pines IPA" in which he adds loads of Columbus, Cascade, Willamette and Centennial hops, and, as he says, "Enough to please any hop-head."

Jeff also won a GABF Silver medal for this IPA in the American-Style IPA category. Second place went to Vinnie Cilurzo

of Russian River Brewing in Santa Rosa, CA, for "Pliny the Elder," which won the GABF Gold medal in the Imperial-IPA category. Third place went to Chuck Silva of Green Flash Brewing Co. Vista, CA, for "West Coast IPA." Honorable mention went to Bernie Tanning of Great Divide Brewing Co. Denver, CO, for "Hercules Double IPA." Winners were announced by Ralph Olson of Hopunion, who awarded cash and hop certificates from Hopunion and gift certificates from White Labs.

The list of previous Alpha Kings winners by year is as follows:

1999 Larry Bell, Bell's Brewing "Two Hearted Ale"

2000 Gabe Fletcher, Midnight Sun Brewing "Sockeye Red IPA"

2001 Brendan Moylan, Moylan's Brewery "Moylander Double IPA"

2002 Brendan Moylan, Moylan's Brewery "Moylander Double IPA"

2003 Geno Acevedo, El Toro Brewing "Duce Imperial IPA"

2004 Tomme Arthur, Pizza Port Brewing "Hop 15"

As special thanks to Chris Black, the stewards, beer judges and many enthusiasts who made this year's event another success. Congratulations from all of us at Hopunion to the winners and participants of this year's challenge. We look forward to next fall's eighth-annual Alpha King Challenge, so brewers keep this in mind when brewing your "Hoppy" beers this summer. Plan to call us at 1-800-952-4873 to register your entries.

Turn to the back
page for more
news about
hops and
Hopunion CBS

Availability update

By Ralph Woodall
Hopunion CBS

As many brewers know, some 2005 crop hops are in short supply again this year (Centennial, Amarillo, US Magnums to mention a few) while others that were short last year like Crystal and Simcoe, are better.

This is part of what we like to call the never ending cycle of the supply and demand process. which is hard for both growers and brewers to predict with the changing of beer styles, customer's tastes and the increasing hopping rate of many popular new beers.

This has created some over demand on certain varieties and under demand on others. We strive to have the best supply of all hops available to the craft brewing world but each year has some special circumstance that make pre-contracting a must for certain brewers and their signature styles. We appreciate all the efforts by brewers to help us with the Amarillo and Centennial shortage this year that were caused by hot weather making for lower yields compounded by greater demand. We are looking to hear from any brewers who may have over contracted to help us out later in the summer by turning some back to us so we can move it to others.

We are suggesting that brewers in need of Santiam, Centennial, US Magnums and Amarillo pre-contract their 2006 crop hop needs early this year. It looks like Crystal and Simcoe have balanced out and will be in good supply from the 2006 crop but to be safe keep these in mind as well. As for the Willamette, regarding the rumor last year that they were all purchased by a large brewer, we can attest that this was not true as we have our 2005 crop yearly sales needs already contracted and plenty to spare with a good supply coming with the 2006 crop. Some may recall the Cascade shortage rumor a few years ago that also did not pan out to be true.

If you are overly concerned please call us at 1-800-952-4873 for updates or to plan pre-contracting you 2006 crop needs. The spring 2005 issue of the CBQ had a good overview of the process for pre-contracting hops for your review.



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Attention brewer

Craft Beer Quarterly

The Back Page

'05 Hop & Brew School

By Ralph Woodall
Hopunion CBS

This year was the second year for the school, which ended up to be two separate 2-day classes held during the week of Sept. 6-10. Attendance for the week was about 120 brewers, guests and speakers.

Hopunion's Ralph Olson gave an overview of the hop industry, with discussion of both the national and international hop situation.

He discussed some of the newer hop varieties, New Zealand hops and also gave a hand on evaluation and hop rub with some of the fresh 2005 crop.

Ralph and co-worker Ralph Woodall also gave a tour of the Hopunion office, lab, pellet plant and cold storage hop warehouses and explained the hop receiving procedures including, inspection, weighing, pulling of brewing value samples and brewers cuts prior to putting the bales

away.

Guest speaker for this years class were as follows:

Vinnie Cilurzo of Russian River - Dry Hopping, and Tasting Double IPA; Tomme Arthur of Pizza Port - Hops in Belgium Beers; Brian Hunt of Moonlight - Hop Evaluation using Hop Teas; Ron Ryan of Cargill Malt - Primary Beer Staling Mechanisms & Potential Remediation Tactics; Tom Nelson, Sierra Nevada - Results of Gas Chromatography/Olfactometry of Hops; Chris White of White Labs - Hops & Yeast: How They Intermingle; John Isenhour PH.D - Prof. and Hopunion Ambassador - Organoleptic Evaluation & Interpretation of Aromatic Hop Oil Components

The class took a field trip to Moxee to see hop harvest operations and tour the Hop Museum in Toppenish. The class also had BBQ dinners each night by Whistran



Tonya Cornett, brewer at Bend Brewing Co., an attendee at the Hop and Brew school, falls into a truck full of hops while on the hop tour.

Brewer/Owner Larry Barbus.

Plan early if you want to attend the 2006 classes (for more information, read the story below).

Call us at 1-800-952-4874 to get on the pre-registration list.

In Remembrance

By Ralph Woodall

We want to take a moment to reflect back on some of our brewing world members who have passed away during the past several years. Our world is ever-changing and we must remember we are the sum of the total of both past and present. With their passing our world changes but we have engrained their spirit into our souls so they still live amongst us.

With this in mind we wish to recognize the lives of some of our departed friends and associates; Henry King former president of the BAA and USBA, Gary Nateman former Counsel for the MBAA and BAA, Dr. Joseph "Joe" Owades legendary Brewing Chemist and Mike Eberle Brewmaster for Steamworks Brewing in Durango, CO. We also wish to recognize the other recent departed who were not listed here.

Water conditions

From Page 1

Next hop school in the planning stages

The third annual event will be held again at the Hopunion CBS, LLC office and warehouse complex in Yakima, WA. The class dates this year are September 5-6th for the first session and September 7-8th for the second. The good attendance over the past two years classes has required the two separate dates and Ralph Olson is planning to have another talented group of brewers give hops and brewing oriented talks along with other hop related topics.

The school also includes a bus trip to a Moxee area hop ranch to see the harvest process as well as the American Hop Museum in Toppenish. The registration costs may increase, but will still be minimal to cover the two day event.

The fee also includes a lunch and evening BBQ each day. This is a great time to network with fellow brewers, learn more about hops, drink some "hoppy beers" and experience the Yakima Valley Hop

Harvest at it's prime time. Look for our flyer in the mail in June/July with all the registration details. We have lots of good local hotels, and also a State Park for camping.

For fisherman plan an extra day or two to enjoy world class catch and release fly fishing in the Yakima River canyon.

If you want a jump on the others, you can call us at 1-800-952-4874 to get on our pre-registration list.

these years. Hopunion CBS, LLC Washington grower-owners have senior water rights as they are located in the original hop growing area of the Moxee Valley east of Yakima.

Be thankful we are not talking drought this year but as noted above it has to be "really bad" to have a major impact on the hop supply as a whole. It can impact certain varieties, which may be a key hop for you, so have an "out hop" in mind in case any particular year you are hit by supply/demand even when it is not a drought year.