

The OVHA Tap

Vol 12 No. 2

February 2008

Meeting Wednesday, 7:00 pm Feb 27 at Germania Mannerchor

Featured Beer: Lager

Upcoming events

Big Brew Day

We will be hosting Big Brew Day again at Germania on May 3rd. Recipes will be available by March 31st. This should be a fun year, as we all know that hops are in short supply and very limited selection for most of us (unless you had a supply contract). Bring your brewing stuff, this is a public demonstration. We will probably brew six beers (three full mash, three from extract).

Atria Assisted Living Demonstration

We still haven't managed to get our demonstration at Atria done, hopefully we can find a weekend sometime this Spring!

National Homebrew Meeting

June 19th, 20th, and 21st. Details later.

Indiana State Fair Homebrew Competition

Submissions for the Indiana State Cup must be in by late June. Save some of your best for this -- we've had several members place well in the past. Exact dates when available.

WestSide Sportsman's Club Demonstration

We will be doing another demonstration at the Sportsman's Club Barbeque competition this year. This event was quite a blast last year. Plan on bringing a keg or two of brew to dispense! Should be quite a bit of excellent barbeque circulating late in the afternoon as well. Exact dates when announced.

Brewer's Musings

It's been a slow month for brewing this month. All that ice (and driving in it) wore me out, and we are fully stocked with brew at the Barn!

I have learned something about doing decoctions, though. Most important, extract is MUCH higher than a stepped infusion mash of the same grain. Nice if you want high gravity, but it can be an annoyance if you were expecting a more normal gravity -- I tend to aim for an initial SG of around 1.040 or a bit higher. Ending up with 1.050 is a surprise, alibet a nice one.

The other thing decoction brewing seems to do it greatly extend secondary fermentation. Even at fairly high temperatures, the beer will slowly work for months, and bottling too soon is an invitation to gushing bottles. Lagging is really not an option with decoction brewing, meaning one must take great care to prevent contamination. This beer isn't going to get bottled for months no matter what you do. Cold storage is more or less required if you want to mature these beers properly -- at fermentation temps, the aroma will be greatly diminished by the



Meeting Schedule 2008

January 30th 7:00 pm at Germania

February 27th 7:00 pm Germania

March 26th 7:00 pm at Germania

April 30th 7:00 pm at Germania

Beer Evaluation Schedule

January: Mystery / End of Year

February: Lager

March: Porter / Stout

April: Pale Ale / IPA

Meeting Subject Schedule

January: Kegging

February: Beer Defects

March: Yeast Starters

April: Water and Beer Brewing

1. LIGHT LAGER

1A. Lite American Lager

Aroma: Little to no malt aroma, although it can be grainy, sweet or corn-like if present. Hop aroma may range from none to a light, spicy or floral hop presence. Low levels of yeast character (green apples, DMS, or fruitiness) are optional but acceptable. No diacetyl.

Appearance: Very pale straw to pale yellow color. White, frothy head seldom persists. Very clear.

Flavor: Crisp and dry flavor with some low levels of grainy or corn-like sweetness. Hop flavor ranges from none to low levels. Hop bitterness at low level. Balance may vary from slightly malty to slightly bitter, but is relatively close to even. High levels of carbonation may provide a slight acidity or dry “sting.” No diacetyl. No fruitiness.

Mouthfeel: Very light body from use of a high percentage of adjuncts such as rice or corn.

Very highly carbonated with slight carbonic bite on the tongue. May seem watery.

Overall Impression: Very refreshing and thirst quenching.

Comments: A lower gravity and lower calorie beer than standard international lagers. Strong flavors are a fault. Designed to appeal to the broadest range of the general public as possible.

Ingredients: Two- or six-row barley with high percentage (up to 40%) of rice or corn as adjuncts.

Vital Statistics:	OG:	1.028 – 1.040	
IBUs:	8 – 12	FG:	0.998 – 1.008
SRM:	2 – 3	ABV:	2.8 – 4.2%

Commercial Examples: Bitburger Light, Sam Adams Light, Heineken Premium Light, Miller Lite, Bud Light, Coors Light, Baltika #1 Light, Old Milwaukee Light, Amstel Light

1B. Standard American Lager

Aroma: Little to no malt aroma, although it can be grainy, sweet or corn-like if present. Hop aroma may range from none to a light, spicy or floral hop presence. Low levels of yeast character (green apples, DMS, or fruitiness) are optional but acceptable. No diacetyl.

Appearance: Very pale straw to medium yellow color. White, frothy head seldom persists. Very clear.

Flavor: Crisp and dry flavor with some low levels of grainy or corn-like sweetness. Hop flavor ranges from none to low levels. Hop bitterness at low to medium-low level. Balance may vary from slightly malty to slightly bitter, but is relatively close to even.

High levels of carbonation may provide a slight acidity or dry “sting.” No diacetyl. No fruitiness.

Mouthfeel: Light body from use of a high percentage of adjuncts such as rice or corn. Very highly carbonated with slight carbonic bite on the tongue.

Overall Impression: Very refreshing and thirst quenching.

Comments: Strong flavors are a fault. An international style including the standard mass-market lager from most countries.

Ingredients: Two- or six-row barley with high percentage (up to 40%) of rice or corn as adjuncts.

Vital Statistics:	OG:	1.040 – 1.050	
IBUs:	8 – 15	FG:	1.004 – 1.010
SRM:	2 – 4	ABV:	4.2 – 5.3%

Commercial Examples: Pabst Blue Ribbon, Miller High Life, Budweiser, Baltika #3 Classic, Kirin Lager, Grain Belt Premium Lager, Molson Golden, Labatt Blue, Coors Original, Corona Extra, Foster’s Lager

1C. Premium American Lager

Aroma: Low to medium-low malt aroma, which can be grainy, sweet or corn-like. Hop aroma may range from very low to a medium-low, spicy or floral hop presence. Low levels of yeast character (green apples, DMS, or fruitiness) are optional but acceptable. No diacetyl.

Appearance: Pale straw to gold color. White, frothy head may not be long lasting. Very clear.

Flavor: Crisp and dry flavor with some low levels of grainy or malty sweetness. Hop flavor ranges from none to low levels. Hop bitterness at low to medium level. Balance may vary from slightly malty to slightly bitter, but is relatively close to even. High levels of carbonation may provide a slight acidity or dry “sting.” No diacetyl. No fruitiness.

Mouthfeel: Medium-light body from use of adjuncts such as rice or corn. Highly carbonated with slight carbonic bite on the tongue.

Overall Impression: Refreshing and thirst quenching, although generally more filling than standard/lite versions.

Comments: Premium beers tend to have fewer adjuncts than standard/lite lagers, and can be all-malt. Strong flavors are a fault, but premium lagers have more flavor than standard/lite lagers. A broad category of international mass-market lagers ranging from up-scale American lagers to the typical “import” or “green bottle” international beers found in America.

Ingredients: Two- or six-row barley with up to 25% rice or corn as adjuncts.

Vital Statistics:	OG:	1.046 – 1.056	
IBUs:	15 – 25	FG:	1.008 – 1.012
SRM:	2 – 6	ABV:	4.6 – 6%

Commercial Examples: Full Sail Session Premium Lager, Miller Genuine Draft, Corona Extra, Michelob, Coors Extra Gold, Birra Moretti, Heineken, Beck’s, Stella Artois, Red Stripe, Singha

1D. Munich Helles

Aroma: Pleasantly grainy-sweet, clean pils malt aroma dominates. Low to moderately-low spicy noble hop aroma, and a low background note of DMS (from pils malt). No esters or diacetyl.

Appearance: Medium yellow to pale gold, clear, with a creamy white head.

Flavor: Slightly sweet, malty profile. Grain and pils malt flavors dominate, with a low to medium-low hop bitterness that supports the malty palate. Low to moderately-low spicy noble hop flavor. Finish and aftertaste remain malty. Clean, no fruity esters, no diacetyl.

Mouthfeel: Medium body, medium carbonation, smooth maltiness with no trace of astringency.

Overall Impression: Malty but fully attenuated pils malt showcase.

History: Created in Munich in 1895 at the Spaten brewery by Gabriel Sedlmayr to compete with Pilsner-style beers.

Comments: Unlike Pilsner but like its cousin, Munich Dunkel, Helles is a malt-accentuated

beer that is not overly sweet, but rather focuses on malt flavor with underlying hop bitterness in a supporting role.

Ingredients: Moderate carbonate water, Pilsner malt, German noble hop varieties.

Vital Statistics:	OG:	1.045 – 1.051	
IBUs:	16 – 22	FG:	1.008 – 1.012
SRM:	3 – 5	ABV:	4.7 – 5.4%

Commercial Examples: Weihenstephaner Original, Hacker-Pschorr Münchner Gold, Bürgerbräu Wolznacher Hell Naturtrüb, Mahr’s Hell, Paulaner Premium Lager, Spaten Premium Lager, Stoudt’s Gold Lager

1E. Dortmunder Export

Aroma: Low to medium noble (German or Czech) hop aroma. Moderate pils malt aroma; can be grainy to somewhat sweet. May have an initial sulfury aroma (from water and/or yeast) and a low background note of DMS (from pils malt). No diacetyl.

Appearance: Light gold to deep gold, clear with a persistent white head.

Flavor: Neither pils malt nor noble hops dominate, but both are in good balance with a touch of malty sweetness, providing a smooth yet crisply refreshing beer. Balance continues through the finish and the hop bitterness lingers in aftertaste (although some examples may finish slightly sweet). Clean, no fruity esters, no diacetyl. Some mineral character might be noted from the water, although it usually does not come across as an overt mineral flavor.

Mouthfeel: Medium body, medium carbonation.

Overall Impression: Balance and smoothness are the hallmarks of this style. It has the malt profile of a Helles, the hop character of a Pils, and is slightly stronger than both.

History: A style indigenous to the Dortmund industrial region, Dortmunder has been on the decline in Germany in recent years.

Comments: Brewed to a slightly higher starting gravity than other light lagers, providing a firm malty body and underlying maltiness to complement the sulfate-accentuated hop bitterness. The term “Export” is a beer strength category under German beer tax law, and is not strictly synonymous with the “Dortmunder” style. Beer from other cities or regions can be brewed to Export strength, and labeled as such.

Ingredients: Minerally water with high levels of sulfates, carbonates and chlorides, German or Czech noble hops, Pilsner malt, German lager yeast.

Vital Statistics:	OG:	1.048 – 1.056	
IBUs:	23 – 30	FG:	1.010 – 1.015
SRM:	4 – 6	ABV:	4.8 – 6.0%

Commercial Examples: DAB Export, Dortmunder Union Export, Dortmunder Kronen, Ayinger Jahrhundert, Great Lakes Dortmunder Gold, Barrel House Duveneck’s Dortmunder, Bell’s Lager, Dominion Lager, Gordon Biersch Golden Export, Flensburg Gold

2. PILSNER

2A. German Pilsner (Pils)

Aroma: Typically features a light grainy pils malt character (sometimes Graham cracker-like) and distinctive flowery or spicy noble hops. Clean, no fruity esters, no diacetyl. May have an initial sulfury aroma (from water and/or yeast) and a low background note of DMS (from pils malt).

Appearance: Straw to light gold, brilliant to very clear, with a creamy, long-lasting white head.

Flavor: Crisp and bitter, with a dry to medium-dry finish. Moderate to moderately-low yet well attenuated maltiness, although some grainy flavors and slight pils malt sweetness are acceptable. Hop bitterness dominates taste and continues through the finish and lingers into the aftertaste. Hop flavor can range from low to high but should only be derived from German noble hops. Clean, no fruity esters, no diacetyl.

Mouthfeel: Medium-light body, medium to high carbonation.

Overall Impression: Crisp, clean, refreshing beer that prominently features noble German hop bitterness accentuated by sulfates in the water.

History: A copy of Bohemian Pilsener adapted to brewing conditions in Germany.

Comments: Drier and crisper than a Bohemian Pilsener with a bitterness that tends to linger more in the aftertaste due to higher attenuation and higher-sulfate water. Lighter in body and color, and with higher carbonation than a Bohemian Pilsener. Modern examples of German pilsners tend to become paler in color, drier in finish, and more bitter as you move from South to North in Germany.

Ingredients: Pilsner malt, German hop varieties (especially noble varieties such as Hallertauer, Tettnanger and Spalt for taste and aroma), medium sulfate water, German lager yeast.

Vital Statistics:	OG:	1.044 – 1.050	
IBUs:	25 – 45	FG:	1.008 – 1.013
SRM:	2 – 5	ABV:	4.4 – 5.2%

Commercial Examples: Victory Prima Pils, Bitburger, Warsteiner, Trumer Pils, Old Dominion Tupper’s Hop Pocket Pils, König Pilsener, Jever Pils, Left Hand Polestar Pilsner, Holsten Pils, Spaten Pils, Brooklyn Pilsner

2B. Bohemian Pilsener

Aroma: Rich with complex malt and a spicy, floral Saaz hop bouquet. Some pleasant, restrained diacetyl is acceptable, but need not be present. Otherwise clean, with no fruity esters.

Appearance: Very pale gold to deep burnished gold, brilliant to very clear, with a dense, long-lasting, creamy white head.

Flavor: Rich, complex maltiness combined with a pronounced yet soft and rounded bitterness and spicy flavor from Saaz hops. Some diacetyl is acceptable, but need not be present. Bitterness is prominent but never harsh, and does not linger. The aftertaste is balanced between malt and hops. Clean, no fruity esters.

Mouthfeel: Medium-bodied (although diacetyl, if present, may make it seem medium-full), medium carbonation.

Overall Impression: Crisp, complex and well-rounded yet refreshing.

History: First brewed in 1842, this style was the original clear, light-colored beer.

Comments: Uses Moravian malted barley and a decoction mash for rich, malt character. Saaz hops and low sulfate, low carbonate water provide a distinctively soft, rounded hop profile. Traditional yeast sometimes can provide a background diacetyl note. Dextrins provide additional body, and diacetyl enhances the perception of a fuller palate.

Ingredients: Soft water with low mineral content, Saaz hops, Moravian malted barley, Czech lager yeast.

Vital Statistics:	OG:	1.044 – 1.056
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IBUs: 35 – 45 FG: 1.013 – 1.017
SRM: 3.5 – 6 ABV: 4.2 – 5.4%

Commercial Examples:Pilsner Urquell, Kruovice Imperial 12°, Budweiser Budvar (Czechvar in the US), Czech Rebel, Staropramen, Gambrinus Pilsner, Zlaty Bazant Golden Pheasant, Dock Street Bohemian Pilsner

2C. Classic American Pilsner

Aroma:Low to medium grainy, corn-like or sweet maltiness may be evident (although rice-based beers are more neutral). Medium to moderately high hop aroma, often classic noble hops. Clean lager character, with no fruitiness or diacetyl. Some DMS is acceptable.

Appearance:Yellow to deep gold color. Substantial, long lasting white head. Bright clarity. Flavor:Moderate to moderately high maltiness similar in character to the Continental Pilsners but somewhat lighter in intensity due to the use of up to 30% flaked maize (corn) or rice used as an adjunct. Slight grainy, corn-like sweetness from the use of maize with substantial off-setting hop bitterness. Rice-based versions are crisper, drier, and often lack corn-like flavors.

Medium to high hop flavor from noble hops (either late addition or first-wort hopped). Medium to high hop bitterness, which should not be coarse nor have a harsh aftertaste. No fruitiness or diacetyl. Should be smooth and well-lagered.

Mouthfeel:Medium body and rich, creamy mouthfeel. Medium to high carbonation levels.

Overall Impression:A substantial Pilsner that can stand up to the classic European Pilsners, but exhibiting the native American grains and hops available to German brewers who initially brewed it in the USA. Refreshing, but with the underlying malt and hops that stand out when compared to other modern American light lagers. Maize lends a distinctive grainy sweetness. Rice contributes a crisper, more neutral character.

History:A version of Pilsner brewed in the USA by immigrant German brewers who brought the process and yeast with them when they settled in America. They worked with the ingredients that were native to America to create a unique version of the original Pilsner. This style died out after Prohibition but was resurrected as a home-brewed style by advocates of the hobby.

Comments:The classic American Pilsner was brewed both pre-Prohibition and post-Prohibition with some differences. OGs of 1.050-1.060 would have been appropriate for pre-Prohibition beers while gravities dropped to 1.044-1.048 after Prohibition. Corresponding IBUs dropped from a pre-Prohibition level of 30-40 to 25-30 after Prohibition.

Ingredients:Six-row barley with 20% to 30% flaked maize to dilute the excessive protein levels. Native American hops such as Clusters, traditional continental noble hops, or modern noble crosses (Ultra, Liberty, Crystal) are also appropriate. Modern American hops such as Cascade are inappropriate. Water with a high mineral content can lead to an inappropriate coarseness in flavor and harshness in aftertaste.

Vital Statistics: OG: 1.044 – 1.060
IBUs: 25 – 40 FG: 1.010 – 1.015
SRM: 3 – 6 ABV: 4.5 – 6%

Commercial Examples:Occasional brewpub and microbrewery specials

3. EUROPEAN AMBER LAGER

3A. Vienna Lager

Aroma:Moderately rich German malt aroma (of Vienna and/or Munich malt). A light toasted malt aroma may be present. Similar, though less intense than Oktoberfest. Clean lager character, with no fruity esters or diacetyl. Noble hop aroma may be low to none. Caramel aroma is inappropriate.

Appearance:Light reddish amber to copper color. Bright clarity. Large, off-white, persistent head.

Flavor:Soft, elegant malt complexity is in the forefront, with a firm enough hop bitterness to provide a balanced finish. Some toasted character from the use of Vienna malt. No roasted or caramel flavor. Fairly dry finish, with both malt and hop bitterness present in the aftertaste. Noble hop flavor may be low to none.

Mouthfeel:Medium-light to medium body, with a gentle creaminess. Moderate carbonation. Smooth. Moderately crisp finish. May have a bit of alcohol warming.

Overall Impression:Characterized by soft, elegant maltiness that dries out in the finish to avoid becoming sweet.

History:The original amber lager developed by Anton Dreher shortly after the isolation of lager yeast. Nearly extinct in its area of origin, the style continues in Mexico where it was brought by Santiago Graf and other Austrian immigrant brewers in the late 1800s. Regrettably, most modern examples use adjuncts which lessen the rich malt complexity characteristic of the best examples of this style. The style owes much of its character to the method of malting (Vienna malt). Lighter malt character overall than Oktoberfest, yet still decidedly balanced toward malt.

Comments:American versions can be a bit stronger, drier and more bitter, while European versions tend to be sweeter. Many Mexican amber and dark lagers used to be more authentic, but unfortunately are now more like sweet, adjunct-laden American Dark Lagers.

Ingredients:Vienna malt provides a lightly toasty and complex, melanoidin-rich malt profile. As with Oktoberfests, only the finest quality malt should be used, along with Continental hops (preferably noble varieties). Moderately hard, carbonate-rich water. Can use some caramel malts and/or darker malts to add color and sweetness, but caramel malts shouldn't add significant aroma and flavor and dark malts shouldn't provide any roasted character.

Vital Statistics: OG: 1.046 – 1.052
IBUs: 18 – 30 FG: 1.010 – 1.014
SRM: 10 – 16 ABV: 4.5 – 5.5%

Commercial Examples:Great Lakes Eliot Ness (unusual in its 6.2% strength and 35 IBUs), Boulevard Bobs 47 Munich-Style Lager, Negra Modelo, Old Dominion Aviator Amber Lager, Gordon Biersch Vienna Lager, Capital Wisconsin Amber, Olde Saratoga Lager, Penn Pilsner

3B. Oktoberfest/Märzen

Aroma:Rich German malt aroma (of Vienna and/or Munich malt). A light to moderate toasted malt aroma is often present. Clean lager aroma with no fruity esters or diacetyl. No hop aroma. Caramel aroma is inappropriate.

Appearance:Dark gold to deep orange-red color. Bright clarity, with solid, off-white, foam stand. Flavor:Initial malty sweetness, but finish is moderately dry. Distinctive and complex maltiness often includes a toasted aspect. Hop bitterness is moderate, and noble hop flavor is low to none. Balance is toward malt, though the finish is not sweet. Noticeable caramel or roasted flavors are inappropriate. Clean lager character with no diacetyl or fruity esters.

Mouthfeel:Medium body, with a creamy texture and medium carbonation. Smooth. Fully fermented, without a cloying finish.

Overall Impression:Smooth, clean, and rather rich, with a depth of malt character. This is one of the classic malty styles, with a maltiness that is often described as soft, complex, and elegant but never cloying.

History:Origin is credited to Gabriel Sedlmayr, based on an adaptation of the Vienna style developed by Anton Dreher around 1840, shortly after lager yeast was first isolated. Typically brewed in the spring, signaling the end of the traditional brewing season and stored in cold caves or cellars during the warm summer months. Served in autumn amidst traditional celebrations.

Comments:Domestic German versions tend to be golden, like a strong pils-dominated Helles. Export German versions are typically orange-amber in color, and have a distinctive toasty malt character. German beer tax law limits the OG of the style at 14°P since it is a vollbier, although American versions can be stronger. "Fest" type beers are special occasion beers that are usually stronger than their everyday counterparts.

Ingredients:Grist varies, although German Vienna malt is often the backbone of the grain bill, with some Munich malt, Pils malt, and possibly some crystal malt. All malt should derive from the finest quality two-row barley. Continental hops, especially noble varieties, are most authentic. Somewhat alkaline water (up to 300 PPM), with significant carbonate content is welcome. A decoction mash can help develop the rich malt profile.

Vital Statistics: OG: 1.050 – 1.057
IBUs: 20 – 28 FG: 1.012 – 1.016
SRM: 7 – 14 ABV: 4.8 – 5.7%

Commercial Examples:Paulaner Oktoberfest, Ayinger Oktoberfest-Märzen, Hacker-Pschorr Original Oktoberfest, Hofbräu Oktoberfest, Victory Festbier, Great Lakes Oktoberfest, Spaten Oktoberfest, Capital Oktoberfest, Gordon Biersch Märzen, Goose Island Oktoberfest, Samuel Adams Oktoberfest (a bit unusual in its late hopping)

4. DARK LAGER

4A. Dark American Lager

Aroma:Little to no malt aroma. Medium-low to no roast and caramel malt aroma. Hop aroma may range from none to light spicy or floral hop presence. Can have low levels of yeast character (green apples, DMS, or fruitiness). No diacetyl.

Appearance:Deep amber to dark brown with bright clarity and ruby highlights. Foam stand may not be long lasting, and is usually light tan in color.

Flavor:Moderately crisp with some low to moderate levels of sweetness. Medium-low to no caramel and/or roasted malt flavors (and may include hints of coffee, molasses or cocoa). Hop flavor ranges from none to low levels. Hop bitterness at low to medium levels. No diacetyl. May have a very light fruitiness. Burnt or moderately strong roasted malt flavors are a defect.

Mouthfeel:Light to somewhat medium body. Smooth, although a highly-carbonated beer.

Overall Impression:A somewhat sweeter version of standard/premium lager with a little more body and flavor.

Comments:A broad range of international lagers that are darker than pale, and not assertively bitter and/or roasted.

Ingredients:Two- or six-row barley, corn or rice as adjuncts. Light use of caramel and darker malts. Commercial versions may use coloring agents.

Vital Statistics: OG: 1.044 – 1.056
IBUs: 8 – 20 FG: 1.008 – 1.012
SRM: 14 – 22 ABV: 4.2 – 6%

Commercial Examples:Dixie Blackened Voodoo, Shiner Bock, San Miguel Dark, Baltika #4, Beck's Dark, Saint Pauli Girl Dark, Warsteiner Dunkel, Heineken Dark Lager, Crystal Diplomat Dark Beer

4B. Munich Dunkel

Aroma:Rich, Munich malt sweetness, like bread crusts (and sometimes toast.) Hints of chocolate, nuts, caramel, and/or toffee are also acceptable. No fruity esters or diacetyl should be detected, but a slight noble hop aroma is acceptable.

Appearance:Deep copper to dark brown, often with a red or garnet tint. Creamy, light to medium tan head. Usually clear, although murky unfiltered versions exist.

Flavor:Dominated by the rich and complex flavor of Munich malt, usually with melanoidins reminiscent of bread crusts. The taste can be moderately sweet, although it should not be overwhelming or cloying. Mild caramel, chocolate, toast or nuttiness may be present. Burnt or bitter flavors from roasted malts are inappropriate, as are pronounced caramel flavors from crystal malt. Hop bitterness is moderately low but perceptible, with the balance tipped firmly towards maltiness. Noble hop flavor is low to none. Aftertaste remains malty, although the hop bitterness may become more apparent in the medium-dry finish. Clean lager character with no fruity esters or diacetyl.

Mouthfeel:Medium to medium-full body, providing a firm and dextrinous mouthfeel without being heavy or cloying. Moderate carbonation. May have a light astringency and a slight alcohol warming.

Overall Impression:Characterized by depth and complexity of Munich malt and the accompanying melanoidins. Rich Munich flavors, but not as intense as a bock or as roasted as a schwarzbier.

History:The classic brown lager style of Munich which developed as a darker, malt-accented beer in part because of the moderately carbonate water. While originating in Munich, the style has become very popular throughout Bavaria (especially Franconia).

Comments:Unfiltered versions from Germany can taste like liquid bread, with a yeasty, earthy richness not found in exported filtered dunkels.

Ingredients:Grist is traditionally made up of German Munich malt (up to 100% in some cases) with the remainder German Pilsner malt. Small amounts of crystal malt can add dextrins and color but should not introduce excessive residual sweetness. Slight additions of roasted malts (such as Carafa or chocolate) may be used to improve color but should not add strong flavors. Noble German hop varieties and German lager yeast strains should be used. Moderately carbonate water. Often decoction mashed (up to a triple decoction) to enhance the malt flavors and create the depth of color.

Vital Statistics: OG: 1.048 – 1.056
IBUs: 18 – 28 FG: 1.010 – 1.016
SRM: 14 – 28 ABV: 4.5 – 5.6%

Commercial Examples:Ayinger Altbairisch Dunkel, Hacker-Pschorr Alt Munich Dark,

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time secondary fermentation is over.

The other benefits are very easy sparging if you do a triple decoction (or, in fact, just do the final decoction of mostly liquid to raise to mash-out). Very clear wort in short order, quite nice. Since most of the protein is precipitated by the tannins in the grain husks, the wort is clear and there is much less hot break than normal in the kettle, too. This can be misleading when one is used to the rather copious break typical of lager malts, the wort will look more that from a weakly breaking ale mash. Cold break is unchanged, though, and the usual allowance for "sludge" at the bottom of the kettle after chilling must be made.

I have found that there is also a considerable impact on the flavor and mouthfeel of the resulting beer, too. Decot brews are thicker, fuller, and have much more depth of malt flavor than the same malt in a step infusion brew. The residual long chain sugars that drive the very long fermentation contribute quite a bit of flavor and viscosity to the finished beer, I think.

I'm going to be doing more decoction mashing once I get organized for larger batches. There is little more work involved in doing a ten gallon batch than in a five gallon batch, and a full triple decoction takes most of a day. I don't think there is a cost effective way to automate the process either, as the necessary augers to move the grist in small volumes probably just aren't worth it. If I were brewing a ten barrel batch, it might not be too much of a problem other than needing a spare kettle to boil the grist.

Hop of the Month: Argentinian Cascade

One of the few readily available hops this year is Cascade hops grown in Argentina. Be forewarned, these are NOT simply Cascade hops grown down south! To taste the beer made with them, one's first impression would be Hallertau or Tetnanger rather than the normal bold, citrusy flavor of US Cascade. The aftertaste is more like Cascade, though, and careful evaluation will reveal that they really are Cascade, just transformed into a mellow, vegetal hop instead of brilliant citrus hops. They will make excellent German beers or traditional Pale Ales. American Pale Ale styles will be transformed, however, and whether this is an improvement is strictly up to the brewer!

Malt of the Month: Pilsner Malt

Pilsner Malt is a traditional malt typical of Bohemian malting. Unlike most modern malts, where infusion or step infusion malting is the intended use, Pilsner malt is somewhat undermodified with detectable steely ends in the grains. Since the grist will be boiled at least once during mashing, those steely ends will not result in reduced extract or low enzyme activity. Boiling the grist will release the unmodified starch and protein in the malt, resulting in normal to higher than normal extract along with increased malt viscosity from protein and beta glucans that are normally reduced greatly by full modification. Pilsner malt, however, will not perform as well as fully modified malt in step infusion mashes, yielding poor extract and excessive chill haze.