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**2009 Big Brew**

May 2009

# Foam Floats to the Top

## A LETTER FROM THE PRESIDENT

Having recently returned from vacation in Arizona I have come to realize that the commercial beer selection in the Twin Cities is becoming more diverse. In 2001, when I began my semi-annual visit to the desert southwest, I was amazed at the wide selection of beer I couldn't get at home. Currently there were only a hand full of national brands and couple of local beers that were available there that are not distributed in Minnesota.

Without any scientific basis for my observations I believe this is due to a growing beer community in the twin Cities of which the homebrew community contributes greatly. Even though we are a homebrew club we all benefit from the growth of local commercial brewing. Support your local breweries!

Looking ahead to June, Dave and Sue Luskey will be hosting our monthly meeting along with a tour of Rahr malting in Shakopee. The meeting date is scheduled for June 6th with the tour starting at 11:00 AM and the meeting will follow at 1:00 PM. If you are interested in taking the tour email me at [csmitty42@yahoo.com](mailto:csmitty42@yahoo.com) so we can get an idea of how many people to expect.

I want to thank Eric and Gera for putting together last month's Homebrew Review. I especially want to thank Juno and Northern Brewer for the last-minute use of their warehouse for the meeting. I was unable to attend but have heard many positive reviews of the event.



Prost!  
Chris Smith

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# Big Brew Review

This year's annual Big Brew event was hosted by Flat Earth Brewing Company in St. Paul. More than 30 MHBA members, friends and family came out for the event. We brewed 85 gallons of beer and had a great time sampling homebrew, grilling up some meat and eating from the potluck table. Thanks to everyone who came out, brewed, and brought food or beer. Thanks also to Jeff and all the great people at Flat Earth Brewing Company for supplying the space, restrooms, and all the hot water we could use. You rock.

Held every first Saturday in May since 1988, Big Brew commemorates National Homebrew Day. God bless you, President Carter.

Below are listed the suggested ingredients for the all-grain and extract version of the two recipes. See <http://www.beertown.org/events/bigbrew/recipes.html> for the inspiration behind, details of, and instructions for the recipes.

## SAISON DU MONT

*Ingredients for all-grain version  
(5.5 gallons yield):*

- 7.25 lb 2-Row Pale Malt
- 2.0 lb Vienna Malt
- 8.0 oz. Flaked Wheat
- 8.0 oz. Flaked Oats
- 8.0 oz. Honey (added after boil)
- 1.0 oz. Golding (4.75% AA - 90 minutes)
- 0.5 oz. Hallertauer (4.0% AA - 15 minutes)
- 0.5 oz. (14 g) Hallertauer, (4.0% AA - 0 min.)
- 0.75 tsp. Irish moss (15 minutes)
- 0.5 oz. crushed coriander (0 minutes)
- 0.5 tsp. grains of paradise (0 minutes)
- 0.25 oz. Curacao (sweet) orange peel (0 min.)
- 0.25 oz. Valencia (bitter) orange peel (0 min.)
- Two (2) packages Wyeast 3724 Belgian Saison Yeast, two (2) White Labs WLP550 Belgian Ale Yeast, or an appropriate yeast starter

*Ingredients for extract with partial mash version  
(5.5 gallons yield):*

- 6.0 lb Pale LME
- 2.0 lb Vienna Malt, mash
- 8.0 oz Flaked Wheat, mash
- 8.0 oz Flaked Oats, mash
- 8.0 oz Honey (added after boil)
- 1.5 oz. Golding, (4.75% AA - 60 minutes)
- 0.5 oz. Hallertauer (4.0% AA - 15 minutes)
- 0.5 oz. Hallertauer (4.0% AA - 0 minutes)
- 0.75 tsp. Irish moss (15 minutes)
- 0.5 oz. crushed coriander (0 minutes)
- 0.5 tsp. grains of paradise (0 minutes)
- 0.25 oz. Curacao (sweet) orange peel (0 min.)
- 0.25 oz. Valencia (bitter) orange peel (0 min.)
- Two (2) packages Wyeast 3724 Belgian Saison Yeast, or two (2) White Labs WLP550 Belgian Ale Yeast, or an appropriate yeast starter

Brewers	Style	Gallons
Chris Smith	Saison	10
Neil Bromenshenkel	Weizenbock	10
Tim Jordan	Clean Ale	5
AL BOYCE	BELGIAN WIT	5
Chris HéChris D.	Am. Amber	10
Neil Schlegel	Robust Porter	5
GRBA	APA	5
Joel	CAL SOUVENIR	5
Tim	Amber ale	5
MIKE B.	WHEAT BITTER	5
TRAVIS F I WARD N	AMARILLO PALE ALE	10
Wilbur & Chip	SAISON	10

**SS MINNOW MILD ALE –  
ENGLISH DARK MILD**

*Ingredients for all-grain version (5 gallons yield):*

5.5 lb. 2-Row English Pale Malt  
11.0 oz. English Crystal 550 L  
6.0 oz. Crystal 1200 L  
3.0 oz. British Chocolate Malt  
3.0 oz. Brown Malt (if unavailable, substitute  
Biscuit Malt or Amber Malt)  
0.75 oz. E. Kent Golding (5.8% AA - 60 min)  
0.75 tsp. Irish moss (15 minutes)  
1 package of either Wyeast 1968 London ESB  
Ale Yeast or White Labs WLP002 English Ale  
Yeast; or make a yeast starter

*Ingredient for extract with specialty grains version  
(5 gallons yield):*

3.5 lb. Light DME,  
or 4.5 lb (2.0 kg) Light LME  
11.0 oz. English Crystal 550 L  
6.0 oz. Crystal 1200 L  
3.0 oz. British Chocolate Malt  
3.0 oz. Brown Malt (if unavailable, substitute  
Biscuit Malt or Amber Malt)  
0.75 oz. E. Kent Golding (5.8% AA - 60 min)  
0.75 tsp. Irish moss (15 minutes)  
1 package of either Wyeast 1968 London ESB  
Ale Yeast or White Labs WLP002 English Ale  
Yeast; or make a yeast starter.



# *Style of the Month*

## (SOTM) – APRIL OVERVIEW

by Gera Exire LaTour

As many of you know, I am working to get the club's Style of the Month back up and running. I am in the process of designing a logo and figuring out prizes. Next newsletter, I hope to have the tally of the results from previous month's SOTM. These are beers that the panel determined received a 25 or above on the BJCP score sheet. In the meantime, here is the list for March and April. Let me know if I missed anyone.

### **MARCH – BEERS WITH OG > 1.080**

Chris Smith (American Barley Wine – represented MHBA in the AHA COC)  
Eric Swann  
Jim Imbertson

### **APRIL – EXTRACT BEERS**

Mike Behrendt (American Pale Ale – represented CRAZY in the AHA COC)  
Jason Vastine (Double IPA – represented MHBA in the AHA COC)  
Gera Exire LaTour  
Travis Fowler  
Mark Glewwe  
Al Krug  
Brock Ray  
Joel Stitzel  
Chip Walton

This month, the SOTM is Biere de Garde. Please bring your example to the May meeting. (You can also bring an example for March or April.)

### **UPCOMING 2009 SOTM:**

- May – Biere de Garde (16D)
- June – Scottish Light 60/- (9A)
- July – Rauchbier (22A)
- August\* – Amber Hybrid (Category 7: Northern German Altbier, California Commons, and Dusseldorf Altbier)
- September\* – European Amber Lagers (Category 3: Vienna Lager and Oktoberfest)
- October – Fruit Cider (28B)
- November\* – Belgian Strong Ales (Category 18: Belgian Blond, Belgian Dubbel, Belgian Trippel, Belgian Golden Strong, and Belgian Dark Strong)
- December – Traditional Bock (5B)

\* Also AHA Club Only Competition



## RECIPE OF THE MONTH:

# Scottish 60 Shilling (60/-)

by Steve Piatz

This month's Recipe of the Month (ROTM) is for a Scottish 60 Shilling in preparation for the June meeting. The Scottish 60 Shilling will take about three to five days or so to ferment out. If you are bottle conditioning you should allow a couple of weeks for the bottles to carbonate. That means you really should get yours brewed in early May if you want it ready for the June meeting. Of course, you don't have to bottle condition the beer so kegging it could save you a few weeks.

### DESCRIPTION

From the description of the Scottish 60 Shilling in the BJCP Guidelines available at <http://www.bjcp.org>. **Aroma:** Low to medium malty sweetness, sometimes accentuated by low to moderate kettle caramelization. Some examples have a low hop aroma, light fruitiness, low diacetyl, and/or a low to moderate peaty aroma (all are optional). The peaty aroma is sometimes perceived as earthy, smoky or very lightly roasted. **Appearance:** Deep amber to dark copper. Usually very clear due to long, cool fermentations. Low to moderate, creamy off-white to light tan-colored head. **Flavor:** Malt is the primary flavor, but isn't overly strong. The initial malty sweetness is usually accentuated by a low to moderate kettle caramelization, and is sometimes accompanied by a low diacetyl component. Fruity esters may be moderate to none. Hop bitterness is low to moderate, but the balance will always be towards the malt (although not always by much). Hop flavor is low to none. A low to moderate peaty

character is optional, and may be perceived as earthy or smoky. Generally has a grainy, dry finish due to small amounts of unmalted roasted barley. **Mouthfeel:** Medium-low to medium body. Low to moderate carbonation. Sometimes a bit creamy, but often quite dry due to use of roasted barley. **Overall Impression:** Cleanly malty with a drying finish, perhaps a few esters, and on occasion a faint bit of peaty earthiness (smoke). Most beers finish fairly dry considering their relatively sweet palate, and as such have a different balance than strong Scotch ales.

There are no classic commercial examples of Scottish 60 Shilling available locally. The style does not travel well and is typically only available served from casks within the United Kingdom.

### SCOTTISH 60 SHILLING

OG	1.030 – 1.035
FG	1.010 – 1.013
SRM	9 – 17
IBU	10 – 20
ABV	2.5 – 3.2%

### BACKGROUND

The Scottish brewers were early adopters of technology such as the thermometer and the hydrometer. The Scottish brewers were also early adopters of sparging when the English brewers were still using double mashes. Double mashing means draining the mash tun into the kettle and then adding additional hot water to the mash, stirring, and draining again. Scottish

brewers typically boiled the wort for 60 to 90 minute versus the English 180 minute boil of the same era. Scottish brewers were farther north, they fermented their ales as cool as 50° F. Whereas the English brewers allowed their ale ferments to go as warm as 70° F, Scottish ferments would rarely go above 65° F. The lower fermentation produces less esters in the beer and can leave a little diacetyl in the beer. The typical Scottish yeast strain tends to have a lower attenuation rate, so with the same original gravity as in an English beer the Scottish beer would finish a little sweeter. Many Scottish yeasts will take the beer only down to one third of the original gravity, i.e. OG 1.100 with a FG of 1.033; where most English ale yeasts would take the beer to one quarter of the original gravity, i.e. OG 1.0100 with a FG of 1.025.

Many of the major Scottish breweries were/are situated in locations where the brewery can obtain multiple levels of dissolved minerals in the water by using different well depths. The typical Scottish ale uses relatively soft water. Hops were more expensive in Scotland than England or continental Europe because Scotland is too far north for cultivating hops. Like most commercial English brewers, the Scottish brewers frequently added adjuncts (sugar) to the kettle.

Today, the 60 Shilling beer (abbreviated as 60/- for 60 shillings and zero pence) has an original gravity of about 1.034. The shilling number associated with a Scottish beer was the price per barrel of the beer. On any given day, as the number of shillings per barrel was increased the original gravity typically increased. For a fixed price of a barrel of beer, as the price of ingredients changed the original gravity of the beer changed. In 1850, a 60 shilling beer had an original gravity of 1.074.

The use of peat-smoked malt in the Scottish beers is NOT appropriate. If there is a slight smoke character in the beer, it is likely from the yeast working at a low temperature.

### THE RECIPE

The recipe target is for an original gravity of 1.034 and about 18 IBUs for 5.5 gallons of wort. That should give you a full five gallons of beer in the fermenter after the typical losses in the kettle. The process calls for a traditional Scottish technique: you want to intentionally caramelize a portion of the wort by taking about a gallon of the wort and boiling it until the color starts to darken before adding the caramelized portion back to the full boil.

This style can double as a yeast starter to grow a lot of yeast to ferment a big beer like a Strong Scotch Ale. Once you rack the 60/- off the yeast you can just run the chilled wort of the big beer into the fermenter.

### ALL-GRAIN VERSION

The bulk of the grist is Pale Ale Malt. The roast barley is just to add a little depth to the color and a light dryness to the beer.

AMOUNT (LBS)	INGREDIENT
6.50	Pale Ale Malt
0.16	Roasted Barley

### EXTRACT VERSION

For the extract version, replace the Pale Ale malt with the light extract.

AMOUNT (LBS)	INGREDIENT
4.00	Light Liquid Malt Extract
0.16	Roasted Barley

If you do not have the ability to boil the full 7 gallons of wort in the extract recipe, try for the largest boil you can handle. If your boil volume is significantly below 7 gallons, you will probably want to increase the hop quantities. Remember, a partial boil is going to result in a slightly darker colored beer than you would get from the same ingredients used in a full volume boil.

## WATER

You should produce this beer with relatively soft to moderately hard water. With the highly alkaline (carbonate) water like from most of the deep wells in the Metro area, I would suggest blending your tap water with equal parts of distilled or reverse osmosis water to reduce the hardness.

## THE BOIL

The hop bill is as follow:

AMOUNT (OZ)	HOP VARIETY (PELLETS)	TIME LEFT
1.00	East Kent Goldings 4.25%AA	60

## POST-BOIL PROCESSING AND FERMENTATION

The yeast choices for the style include the Scottish strains White Labs Edinburgh Ale (WLP028) and Wyeast Scottish Ale (1728). No matter which yeast you select, you need to chill the wort to the suggested fermentation temperature range. Getting some oxygen into the chilled wort is a good idea, oxygen injection or even air from an aquarium pump with a sterile air filter can do the job. You can start the fermentation in to 50's °F and let the temperature climb into the low to mid-60's to keep the ester production low.

If you are bottle conditioning, bottle the beer after targeting about 2.0 volume of carbonation and then allow it to carbonate for a couple of weeks at room temperature

## REFERENCES

Greg Noonan, Scotch Ale, Brewers Publications, 1993.

## PROMASH RECIPE FILES

The Scottish 60 Shilling recipes in ProMash format are at [http://www.mnbrewers.com/recipes/SOTM-0904-Scottish 60 Shilling-all-grain.rec](http://www.mnbrewers.com/recipes/SOTM-0904-Scottish%2060%20Shilling-all-grain.rec) and

[http://www.mnbrewers.com/recipes/SOTM-0904-Scottish 60 Shilling-extract.rec](http://www.mnbrewers.com/recipes/SOTM-0904-Scottish%2060%20Shilling-extract.rec)

## NEXT

In June, the Boiler ROTM will have a recipe for an Oktoberfest/Märzen beer in preparation for the September meeting and AHA Club-only-Competition for the European Amber ales. As always, if you have recipe ideas, questions, or suggestions let me know at [sjpiatz@gmail.com](mailto:sjpiatz@gmail.com).

# Homebrew Review.. Review

The MHBA Homebrew Review was held April 4th at Northern Brewer's warehouse with more than 30 beers on tap and in bottles. There was a People's Choice award for the event and judges also selected two beers to send to the AHA Club-Only-Competition for Extract Beers. Congratulations Al, Jason, and Mike! Thanks again to Juno Choi and everyone at Northern Brewer for letting us run wild in their warehouse.

Here's a look at the winning recipes:

## **ARNIE: I'LL BE BOCK – THE GOVERNATOR (PEOPLE'S CHOICE WINNER)**

*All-grain doppelbock brewed by Al Boyce.*

OG = 1.089 FG = 1.030  
SRM = 23 IBU = 29 ABV: 7.8%

*Ingredients for 5.5 gallons (boil size: 7 gallons)*

- 16.0 lbs. German Light Munich
- 2.0 lbs. Melanoidin Malt
- 1.0 lb. Belgian Aromatic
- 0.16 lb. Belgian Special B
- 0.5 lb. Midwest Wheat Malt
- 1.0 lb. Weyermann CaraMunich
- 0.25 lb. American Chocolate Malt
- 1.0 lb. German 2-Row Pils
- 1.5 oz. Hallertau Mittelfruh pellets (4.5% AA – 60 minutes)
- 0.5 oz. Hallertau Mittelfruh pellets (4.5% AA – 20 minutes)
- 1.0 tsp. Gypsum in mash
- 1.0 tsp. Phosphoric Acid in sparge
- 1.0 tsp. Irish moss in boil
- Wyeast 2206 Bavarian Lager

For more information and instructions, see: <http://www.beertools.com/html/recipe.php?view=3510>

## **CHRONIC WASTING DISEASE (REPRESENTING MHBA AT AHA CLUB-ONLY COMPETITION)**

*Extract-only American IPA brewed by Jason Vastine*

OG = 1.062 FG = 1.012  
IBU = 70 SRM = 11 ABV: 6.53%

*Ingredients for 5 gallons (boil size: 5.72 gallons)*

- 6.0 lbs. Pale LME
- 1.0 lb. Amber LME
- 1.0 lb. Wheat LME
- 1.0 lb. Caramel/Crystal Malt - 20L
- 1.0 oz. Simcoe pellets (13%AA - 60 min.)
- 1.0 oz. Centennial (10%AA - 30 min.)
- 1.0 oz. Amarillo Gold (8.5%AA - 10 min.)
- 2.0 oz. Chinook pellets (13%AA - dry hop)

## **DIRECTIONS:**

Steep the grains for 30 min at 155° F. Boil for 60 minutes. Extract was all added at the top of the boil. Add hop pellets per schedule. Primary was scheduled for seven days, but lasted 10 days at about 65°F. Add dry hops. Secondary was for 3 weeks at 65°F.





**PRAIRIE PALE ALE**  
**(REPRESENTING CRAZY AT**  
**AHA CLUB-ONLY COMPETITION)**

*Extract/specialty grain Pale Ale brewed by Mike Behrendt*

OG = 1.062 FG = 1.017  
IBU = 67 SRM = 9 ABV = 5.9%

- Ingredients for 5 gallons (boil size: 5 gallons; add water to make 5 gallons after boil)
- 6 lbs. Briess Golden Light DME
- 0.75 lb Crystal 20
- 0.5 lb Munich I
- 0.5 lb 2 row malt
- 1.5 oz Northern Brewer pellet hops (60 minutes)
- 1.0 oz. Amarillo pellet hops (15 minutes)
- Whirlfloc (15 minutes)
- 1.0 oz. Amarillo (2 minutes)
- 1.0 oz. Columbus (dry hops)

**DIRECTIONS:**

Make a yeast starter with White Labs 001 California Ale. Steep the grains for 30 minutes in 6 quarts of 152° F degree water. Strain into kettle and sparge with 3 quarts 152° F water. Add water to make 5 gallons, bring to boil, take off heat and add DME.

Bring to boil and add hops and Whirlfloc per schedule. Cool wort, move to primary fermenter and add water to have 5 gallons. Add yeast when temperature is in upper 70s.

Primary fermentation at 68° F for 4-7 days, until bubbles are 1-4 per minute. Rack to secondary and add dry hops. Secondary fermentation at 68° F for 2 weeks. Force carbonate in keg or bottle with priming sugar. Condition four weeks, it does get better.



NEW LOCATION for June Meeting:

## Learn saki making at moto-i

Due to an unforeseen development, the Rahr Malting tour is canceled. Instead, for our June meeting, we will be learning about saki brewing at moti-i, the first saki brewpub outside of Japan. Blake Richardson, owner of the Herkimer brewpub, opened the saki pub last fall. Blake will provide a tour of the brewery and explain saki production starting at 10:30 a.m. on Saturday, June 6.

The restaurant opens at noon, and club members are welcome to hang out on the rooftop patio and have lunch, saki or beers. Blake is fine with bottles of homebrew being brought to the meeting but asks that the sampling stop once his customers arrive at noon.

Here's your chance to learn about a brewing style that might eventually become part of beer competitions. Saki is actually closer to beer production than mead or cider.

The saki brewpub is on Lyndale, just north of West Lake Street. The address is 2940 Lyndale. Here's a link: <http://www.moto-i.com/>

# *Upcoming Club Events*

## **SINNERS AT THE SAINTS**

Thursday, May 21, 2009  
Midway Stadium – Main Lot

Game begins at 7:05 p.m.  
Lot opens at 4:05 p.m.

The sinners (i.e. the MHBA) will tailgate at the St. Paul Saints home game vs. Lincoln Saltdogs. If you reserved and paid for your specially-priced MHBA ticket with John Longballa, you're golden. If you didn't, but you still want to attend the game, see <http://www.saintsbaseball.com/tickets/>.

Questions or concerns? E-mail John Longballa at: [jlongballa@newspiritschool.org](mailto:jlongballa@newspiritschool.org).

## **2009 INTER-CLUB CAMPOUT**

July 31-August 2 – Buffalo Campground  
Duluth, MN

The Northern Ale Stars of Duluth & Superior are hosting an Inter-Club Campout July 31 - Aug. 2 at the Buffalo Campground in Duluth. The cost will be \$12.00 per person, per night (tent or trailer). We will be in their group camping area which has picnic tables, fire rings (FIRE JENGA!) and electrical hookups.

There are no water lines in the group area, but water is available at the main building. Those with trailers can fill their tanks there. The campground is next to the Willard Munger trail, so bring your bikes. They also have a softball field and volleyball courts we can use. Pets are allowed.

Saturday, August 1st is National Mead Day so, of course, we will be celebrating by making and drinking mead.

Campground link: <http://www.campingfriend.com/BufaloValley/default.asp?source=GCA>

BYOS

# *Making Maple Syrup*

by Chip Walton

Being a newcomer to Minnesota and a fan of things boiling for hours on end, making my own maple syrup was something I just had to try. After attending a how-to demonstration at Fort Snelling State Park, I bought the stile (tree tap) and drilled a three-inch hole in a maple tree in my front yard. The equipment from homebrewing came in handy. I collected sap in a fermenter bucket with siphon tubing running from the stile to the bucket. The tube went directly to a stopper so there was no outside contamination from leaves, rain, bird droppings, etc. I gathered just under a gallon a day. I collected sap for nearly two weeks, until storing all those gallon containers grew too much of a burden for my fridge.

Boiling day came and I thought it would be a three-or-four hour process. Wrong! It took seven hours to boil 8 gallons down to a 16-ounce jar worth of syrup. The whole thing took place indoors on my stove (which was not recommended by all the advice I'd read – but I don't have an outdoor stove-like set-up). The clear sap was boiled in roasting pans with new sap being added from a warming pan. You want to get the sap fairly warm before adding to the boil or you'll break your boil over and over. Slowly it went from clear to cloudy tan to dark tan and finally to brown right at the end.

The process took so long that I racked my Blonde IPA from primary to secondary and dry hopped it during the waiting process. Multi-tasking is a good thing.

Three videos shot during the process:

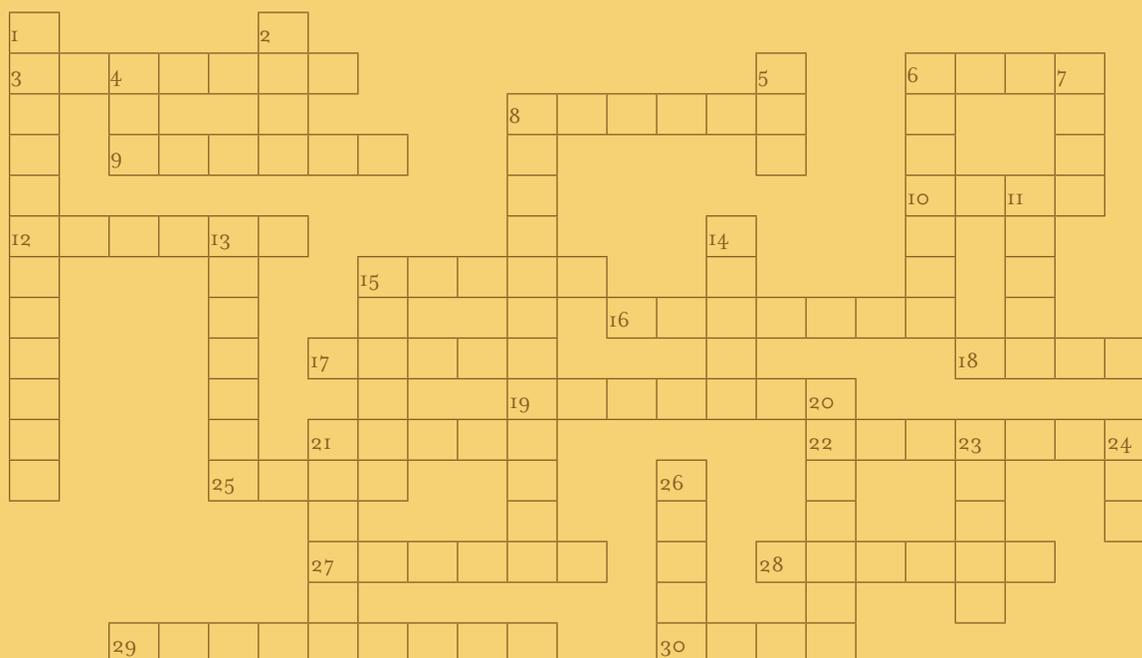
<http://www.youtube.com/watch?v=ITSJC5guC84>

<http://www.youtube.com/watch?v=zyOVpUQP4Y>

<http://www.youtube.com/watch?v=2kTOdRIc4Q>



# Beer Brewing Crossword Puzzle



## ACROSS

3. The intoxicating by-product of fermentation.
6. Syrup (or powder) used as the foundation ingredient in beer.
8. A cone-shaped piece of equipment used to pour liquids into a small-mouthed container.
9. A bitter, characteristically dark brown beer of English origin.
10. Flower cones added to beer as a bittering agent and an aromatic.
12. Hazy, foggy quality in some beers.
15. Between pale and dark.
16. Preparing beer.
17. A microorganism that converts sugars into alcohol and carbon dioxide.
18. An alcoholic drink made by fermenting honey and water.
19. A fermentable material used a substitute for traditional grains.
21. A dark brew having more hops than porter.
22. Device used during fermentation to allow the escape of gas and prevent contamination.
25. The faucet, or cock, allowing beer to flow from one container to another.
27. Small hard seeds, such as rice, corn or wheat.
28. Grain used to produce the malt.
29. To have cleaned the equipment.
30. The foam sitting atop a pour glass of beer.

## DOWN

1. Tiny bits of matter suspended in a liquid.
2. Liquid extracts that serves as food for the yeast.
4. A bottle's clamped- or crimped-on lid.
5. Beer made with a top fermenting yeast; generally hearty, robust, and fruity.
6. Combining ground malt with water.
7. Any large vessels used in brewing.
8. Converting sugar into alcohol and carbon dioxide.
11. To add sugar to create carbonation.
13. Beer served from a large container.
14. A beer mug holding approximately one pint and often with a hinged lid.
15. Clarifying ingredients added to make beer appear brighter or cleaner.
20. A beer mug, typically made of pewter or silver.
21. An adjustable faucet used to control the flow of liquid.
23. Beer made with bottom fermenting yeast; generally smooth, crisp, and clean.
24. A small cask, used to hold around 5 to 10 gallons of beer.
26. To add yeast to wort.



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**CLASSIFIEDS**

Are you interested in running a classified ad in The Boiler? Contact Chip Walton at [chipaway@hotmail.com](mailto:chipaway@hotmail.com)

**BOILER DEADLINES**

We want members to get involved. This is your club. This is your Boiler. Do you have a brewing story, question, new technique, photo, or story idea you would like to share? Send it to Chip Walton at [chipaway@hotmail.com](mailto:chipaway@hotmail.com)

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**COPY DEADLINE**

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