



THE Rubber Chicken



February 1994

The Newsletter of the PrimeTime Brewers, Grand Rapids Metro Area HomeBrew Club

The "SwimSuit Issue"

Rubber Chicken Vol. 3 NO.2

Send articles, reviews, cartoons, advertising requests, etc., to Mike Cartwright, 1639 Margaret SE. GR. 07, 243-5242 or better yet bring them to the meeting, proceeding the next newsletter, The Third Thursday of every month

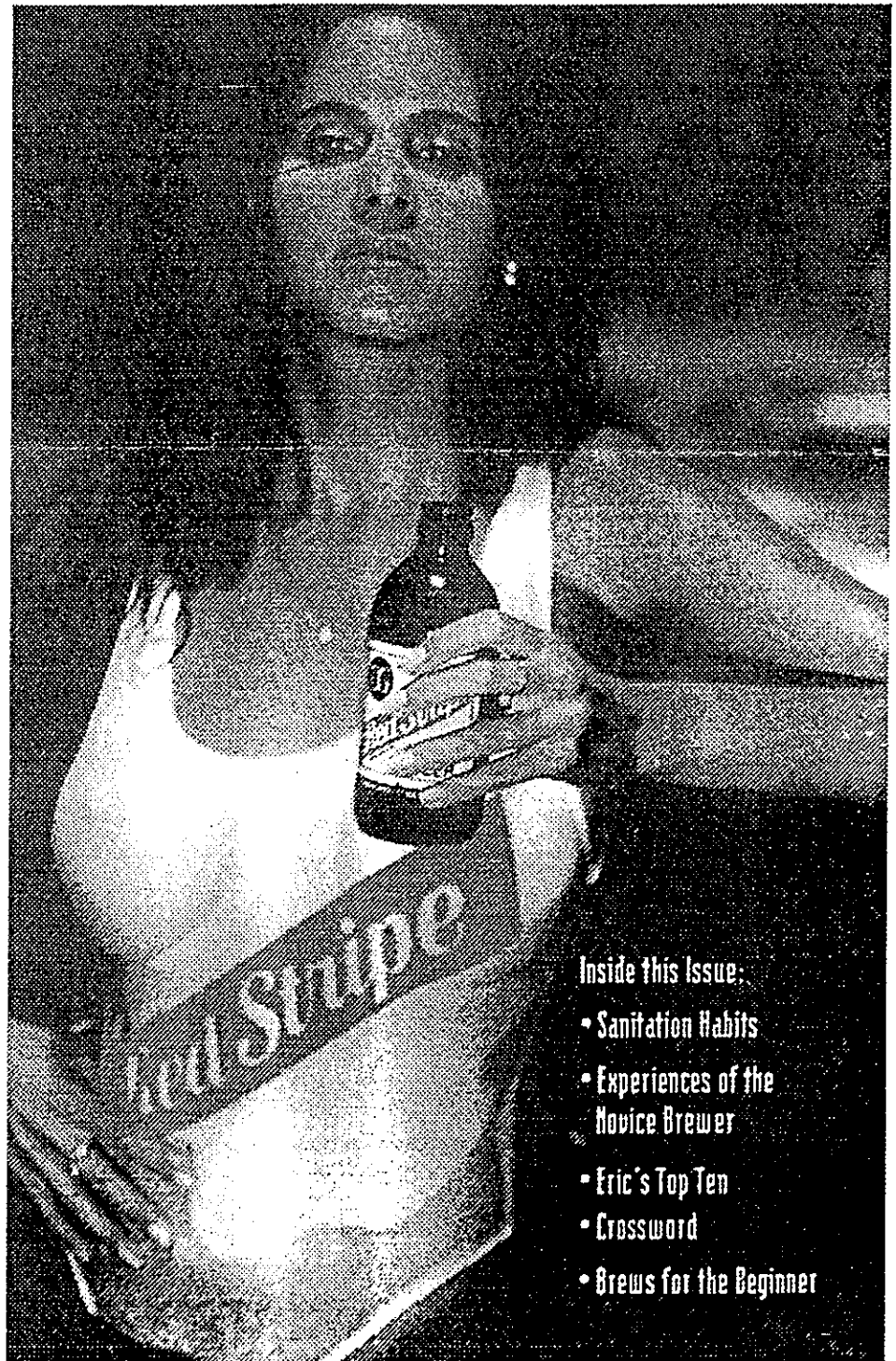
Officers:

- President
Bruce Brandt
- Vice President
John Lemke
- Secretary/Treasurer
Rick Flynn

Febrewary's meeting will be held at our new home, Riverside Realty 211 Spencer NE off Plainfield in the Creston Business district. The meeting is on Thursday, Febrewary 17, at 7:00 pm

Febrewary's brew is
Bock

Drop your brews off at the usual locations for pick-up.



Inside this Issue:

- Sanitation Habits
- Experiences of the Novice Brewer
- Eric's Top Ten
- Crossword
- Brews for the Beginner

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A new brewer can sometimes be overwhelmed with the wealth of variety of ingredients, that are currently available. I remember standing in front of a canned extract display, at a homebrew store, when I first started. After looking at several brands of extract for an hour, I asked for help. What kind of beer does this make? How about if I mix a can of this and a can of that? Do I need to add hops and yeast? How much? Is my wife going to like it (she's writing the check)?

The answers that I normally got were not so much an explanation, but more of a list of ingredients purchased and the resulting beer were not really mine, but more of the helpful store clerk. Was it a good beer? Yes. Was it what I entered the store? Sometimes. Did I feel confident that I could make my own beer? Not really.

For me, this scenario went on for several batches of beer. I'm sure most new brewers start out. You are kind of led by the hand like a small child. It can be by a store clerk or a more experienced friend. Sometimes when kids rebel. Kind of like when ex-president Bush told the world he didn't have a choice anymore. I guess some people take longer than others. I tried to read everything I could to get some ideas. I followed many of the recipes found in books. The beers were all good, but they weren't my beers. Canned extracts weren't really mine, they were just somebody else's interpretation of a style. At that point I started doing research on my favorite beer styles. What makes up a particular style? What are the ingredients? What are the brewing procedures?

One thing that I immediately realized was that all of the various beer styles had one thing in common, the base malt. A base malt is what makes up most of the fermentables. European and American lagers use mainly pilsner or lager malt. Most of the beer styles rely primarily on pale malt. Both of these malts are light in color. The rest of the fermentables are made up of sugars and specialty grain. The difference between beer styles are the amount and type of specialty grains.

After getting all of this straight in my mind, I was off to the homebrew store to use only light dry or liquid malt extract that was unhopped. I didn't use dark extracts because I would be taking care of coloring with specialty grains. With several bags of light dry malt, yeast, hops, and a couple pounds each of specialty grains, I was ready to make my own beer.

If you're not familiar with the effects of the different specialty grains, I would recommend to do a little experimenting. I once made several 1 gallon batches of beer u

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grain in each. I used the same type and amount of base malt and hops in each batch. The following is a good recipe for experimenting;

- 1.25 lbs Light dry malt
- 0.25 cups Crystal, chocolate, black, or roasted grain
- 0.25 ozs Bittering hops, 5% alpha for 60 minutes
- 0.50 pkgs Ale yeast

Add crushed grain to 1 quart of cold water and heat to 160 F. Let steep for 10 minutes and pour through a strainer. Rinse with 1 quart of cold water. Add remaining water and heat to a boil. Remove from heat and add the dry malt. Dissolve and bring to a boil. Add hops and continue boiling for 60 minutes. Cool to 70-80 F as fast as possible and pour into a sanitized fermenter. A 1 gallon glass jug works well. Pitch yeast, aerate well, and attach a blowoff tube. Ferment to completion (5 to 7 days), and prime with 1/4 cup of dry malt. Bottle and leave age at least one month.

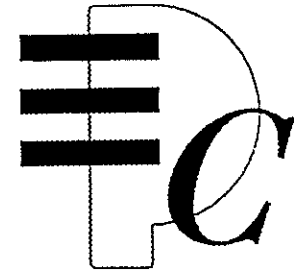
By making several 1 gallon batches at once you can sample the effects of the different specialty grains side by side. Once you know what they taste like individually you can use your newly gained knowledge on full scale batches. This same technique can be used with hops too. Just eliminate the specialty grains and add an extra 1/4 ounce of the same hop type 5 minutes before the end of the boil. Use just 1 hop type for each 1 gallon batch. Even if you don't care about making beer to a particular style, this type of experimenting can point out your likes, and dislikes. By highlighting specific flavors you can learn to tailor a recipe to your taste buds. I've found that some of the brewing texts tend to overdue some of the dark specialty grains. When just starting out you'll want to go easy on the chocolate, black, and roasted grains. A stout and possibly a robust porter are about the only beer styles that you can go somewhat wild with dark grains. One final bit of advice to new brewers. Never, ever, boil your specialty grains. If you do you'll develop a new taste he profile called astringency.

The following is a good recipe to get your feet wet with specialty grains. It's an English mild that is fairly low in gravity yet big on taste. Friends that don't like dark beers will be surprised by this one. This brew can be ready to drink in as little as 3 weeks.

- 5.00 lbs Light dry malt
- 0.50 lbs Crystal malt (for body and sweetness)
- 0.25 lbs Chocolate malt (for color and roasty taste)
- 0.25 lbs Black patent malt (for color and sharp bite)
- 1.00 ozs Bittering hops, 5% alpha for 60 minutes
- 0.50 ozs Flavoring hops, 5% alpha for 20 minutes
- 1-2 pkgs Ale yeast (Windsor or Nottingham preferred)

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Add crushed grains to 1 gallon of cold water. Heat to 160 F and let steep for 10 minutes. Pour through a strainer and rinse with 2 quarts of water, 160 F preferred. Add 2 more quarts of water and heat to a boil. Remove from heat and dissolve in the dry malt. Return to stove and bring to a boil. Add bittering hops and boil for 40 minutes. Add flavoring hops and boil for 20 minutes longer. Pour into fermenter and top up with ice cold water to make 5 gallons. Cover and cool to 70-80 F as quickly as possible. Pitch yeast, aerate well, and attach half filled airlock. Ferment to completion (2-stage recommended). Prime with 3/4 cup of dry malt or 1/2 cup corn sugar and bottle. This is a low carbonation beer.

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Exploits of the
Novice Brewer
Ron Heeren

Pardon My hiatus. I missed the last meeting due to illness. However, the two water experimentation beers are aging quite nicely. Jim Foley and I brewed two identical strong brown ales, one gallon each. Each has its mark of the water tapped or filtered. At this point, Jim and I have tasted the aged results but that is not to say that we didn't notice plenty of subtle differences in the bottling and fermentation of this rather simple exercise in proving the adage of the Ham's beer bear, or the boast of Olympia and Coors. What does the Water have to do with it all?

I know, we were supposed to have brought it to the last meeting. I was out with the flu. Jim's directicoulousis was acting up and the doctor put him on Zantac, banning the brew. Worse fates have happened. It will be ready in January. The question is: Will we? Maybe if we both end up under the weather, we can rope Flynn into bringing it in, but he'll probably say, "only if I can keep the bottles."

The recipe used called for 1 1/2 lb. light dry malt extract, 1/4 lb. crystal malt. 3.5 grams of-pearl hops for flavoring and bittering boiled one hour, 3.5 grams saaz hops finished out for aroma during the final five minutes of the boil, and 1 tblspn of burton water salts and 1/8 tsp. of irish moss rounded out the recipe. Bottling sugar used 1/4 cup of malt extract. Primary fermentation lasted one week and two weeks in the secondary, then into the bottles. n't o

In comparing the two brews, Jim and I found that there was a noticeable saltiness to the unfiltered water supplied by Plainfield Township's wells. It strengthened the bitterness characteristics of the pearl hop, greatly diminishing the maltiness and sweetness in the tap water brew. The hop aroma was also more distinctive in the unfiltered batch. We concluded that the unfiltered brew pole vaults over the from of the tongue right to the sides and the back. The unfiltered waters salty characteristics are due to the high amount of calcium and salts found in the ground water of the area. Vince, at the water department, tells me that the calcium pulled out of the water at the filtration plant could sweeten all the sour (low ph) soil in West Michigan if anyone wants to come to the plant and take it away. He uses it in his garden regularly and its there for the taking.

The filtered beer was much more complex in character. It fined the entire tongue with taste sensations. The residual sweetness of the malt came through nicely. The filtered beer was much better balance than its unfiltered counterpart. It came out very tasty indeed. This beer traveled a slow enjoyable journey down the path to the esophagus.

So now we will find out the rest of the club thinks as we bring this to the January meeting. We might even enter it in the competition just to see how the experienced brewers enjoy it.

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Sanitation Habits Bruce Brandt (C)

As homebrewers, sanitation is something that we all must deal with. It is usually a love-hate relationship. We love how it helps keep our beer fresh and clean tasting. We hate sanitizing because of the valuable brewing time it takes up. New brewers must have the techniques and need for sanitizing pounded into them. Veteran brewers must constantly be reminded of it so they don't become lazy. There is no greater reminder of sanitation needs than when a batch of beer is ruined.

A common misconception among homebrewers is that normal sanitation removes or kills all wild yeast, bacteria, and every other nasty critter. This is mostly false. A good disinfectant such as chlorine will do a lot of damage, but it doesn't put the bad guys down for the count. What we are trying to accomplish by sanitizing, is to reduce the populations of the various beer offenders, to a point where the yeast can dominate. Wild yeast and bacteria are still present, in small amounts, but have to compete with a large population of yeast. They are all trying fight for the same goodies in your wort to survive. The biggest pig at the trough usually gets the most to eat.

Once the yeast is the dominating factor in your wort, it is producing alcohol, CO₂, and lowering the pH. The hops that you add, along with the alcohol and low pH, have some effect on certain bacteria. There are a few types of bacteria that can survive all of these conditions. Some bacteria can even withstand 15 minutes in an autoclave. Don't try to kid yourself, some, if not all, of the common bacteria and wild yeasts are present in your finished beer. Our jobs as homebrewers is to make their small lives as miserable and unproductive as we can. How do we go about doing that?

Before we even get to sanitizing agents and techniques, we must look at the brewing equipment. Everything that comes in contact with your wort or beer is suspect. New brewers usually purchase new equipment or get hand-me-downs. If the equipment hasn't been used for beer or winemaking before, thorough cleaning, ^{beer} sanitizing are a breeze. Plastic fermenters are fine when you are just starting out. Once you become seriously involved in homebrewing I would advise that you switch to glass or stainless. When you scrub out a plastic fermenter to remove hop scum, you're eventually going to scratch it. Scratches are almost impossible to clean out and they invite bacteria growth. Plastic racking tubes and hose are a little harder to substitute. I just haven't found anything better. Your best bet is to replace them every 4 to 6 months. Airlocks and stoppers should receive the same attention. Even glass carboys and bottles can get scratched by the metal wire on brushes. I guess the best bit of advise is don't become lazy and don't be cheap. Deciding it's time to replace a \$2 racking tube after infecting a \$50 batch of barley wine is an expensive lesson.

Your house itself is a big bacteria and wild yeast landfill. Pets, plants, fresh fruits and vegetables, vacuum cleaners, you name it. Even your wife, kids, you, and your bad beer breath are sources of contamination. I know that all brewers, especially their wives, wish that they had a separate place in which to brew. That's probably why we're called homebrewers, because most of us don't. Maybe someday. For the time being just scrub and clean. Counters, floors, stove, everything. Wipe it down with a weak bleach solution and spray some Lysol around. While doing your brewing and bottling tasks keep your windows closed and restrict any movement in your area by kids, pets, etc. as best you can. Also don't forget to take out the trash!

As stated before, everything that comes in contact with your wort or beer needs to be cleaned, then sanitized. General cleaning can be done with hot water and a little elbow grease. Detergents can be used as long they're not perfumed. Washing soda or soda ash can also be used. I have personally used potassium hydroxide or caustic soda on hard to clean items. It must be used with hot water and is somewhat dangerous to work with. Any kind of cleaning agent used must be very thoroughly rinsed out before sanitizing.

Regular, unscented chlorine bleach is probably the most common sanitizer used by home brewers. It's cheap, easy to use, and very effective. One teaspoon per 5 gallons of cold water will sanitize with 30 minutes of contact time. It is also a good cleaning agent. Some books recommend that you don't have to rinse if items are left to drip dry. Others say to rinse thoroughly with hot water. I personally rinse out my containers. The choice is yours. Rinsing with untreated water may contaminate the vessel, or air

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Sanitation Habits
Bruce Brandt

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I gave up on chlorine bleach about 3 years ago because of a bad experience. I was preparing entries for the AHA National conference. I had soaked my bottles overnite in chlorine solution. The next day I rinsed each bottle 3 times with hot water, using a Jet washer. The beer was bottled and sent off for judging. Every beer that I sent was judged as having chlorophenolic compounds present. Evidently some chlorine residue was left in the bottles. Chlorine left in a beer will covert to phenolic compounds over a period of time. Their taste threshold is very low, so it doesn't take much. Along about the same time I got into kegging equipment. Since you shouldn't use chlorine in stainless I made the switch.

Currently, I'm using a concentrate called Iodophor. This is an iodine based solution with phosphorus added for its cleaning abilities. It is commonly used in the dairy, food service, and brewing industries. One tablespoon per 5 gallons of cold water will sanitize in 5 to 10 minutes of contact time. No rinsing is necessary since the taste threshold of the solution is below our perception level. It is safe and noncorrosive with common brewing materials, but can stain if used with hot water or in excess. Iodophor's negative aspects are its cost and some environmental concerns due to its phosphorus content. It is reusable to a certain extent. If the water still shows some color, the sanitizing power is still there. The toxicity of the concentrate is high, as is bleach.

There are a few other sanitizing solutions and powders on the homebrew market. The only one that I have tried is B-brite. It seems to work very well. My only concern was the high cost and how much you needed per gallon of water. Besides the commercial sanitizers, "The Complete Joy of Homebrewing", as well as other texts, list several household variety solutions. Alcohol, ammonia, and hydrogen peroxide to name just a few. I think I'll pass on those, myself. Some of the older books, and some winemakers/brewers suggest using sodium or potassium metabisulfate. Metabisulfates are not really sanitizers, but antifermenting agents. They retard or stunt the growth of wild yeast and some bacteria by releasing sulfur compounds. Winemakers will add their yeast after the sulfur has dissipated. A healthy crop of yeast, along with a wine's high acidity and alcohol content discourage any foreign growth. Using metabisulfates in beer making would be less than satisfactory.

By using good cleaning and sanitation habits and well kept equipment, will all your beers be trouble-free? Not necessarily. All of these time consuming tasks only give your brewing yeast an advantage or head start. By under pitching, aerating poorly, or using contaminated yeast, you may be leaving yourself wide open to infection. For the last few years there has been quite a controversy regarding dried yeast. Most of the brands have been tested and were found to contain significant amounts of wild yeast and bacteria. To date, none of the labs have been willing to stick their necks out with the data. It was also found that dried yeast has up to a 50 percent mortality rate. That means that half of that 7 gram package could be dead before you even pitch it.

Does that mean that you should never use dried yeast? I usually advise people against it, especially for all-grain beer. Too much time is invested in the wort to risk it. What about the extract brewer that's just starting out? I would recommend that the yeast on top of the can of extract be tossed. There's no way of knowing its true age or origin. Buy 2 to 3 packages of fresh yeast from a reputable manufacturer and rehydrate it. Rehydrating not only proofs the yeast, but also doesn't shock it with the strong sugar solution of your wort.

Working a dried or liquid yeast culture into a starter is always recommended. One to four quarts of active yeast starter is adequate. Low gravity ales, under 1.060, will need 1 to 2 quarts. High gravity ales, Scottish ales, and lagers need 3 to 4 quarts of starter. I can already hear the testimonials of how you can pitch just one 5 gram package of dried yeast and the house will start shaking by morning. This guy just isn't buying it. A 24 to 36 hour lag time is more typical. With an adequate starter you can cut this time down to between 2 and 6 hours. The longer it takes a beer to start, the greater the risk of something nasty growing in your fermenter. Proper aeration of your wort is also critical for proper yeast growth and fermentation. Yeast goes through an initial respiratory period or aerobic state while it is adapting to your wort. During this time the yeast is absorbing oxygen and nutrients so it has the strength to complete the fermentation. A lack of dissolved oxygen in your wort can cause the yeast to switch over to an anaerobic state before it has its full strength. This will cause poor performance and the likelihood of a stuck fermentation. Any excess oxygen not required by the yeast is expelled through your airlock.

Sanitation and a good healthy yeast supply will help make your beer the best that it can be. Sanitary habits need to be followed right up to boiling your prime and bottle caps. Will all of the work and attention to detail pay off? So far it has for me. I know that my beers taste better now. Have I ever had a serious infections in a beer? You bet. It was caused by laziness and trying to sneak in a batch during the heat of the summer. A last bit of advice is to try out your brews on somebody who knows their off flavors. Don't get mad if your feelings get hurt. Some bacteria (i.e. house flavors) have a tendency of sneaking up on you slowly. You will eventually become desensitized to their taste. Till next month - see ya!

THE LAST BURP!

1994

* February	Bock
March	Scottish Ale
* April	Stout
May	Altbier/Kolsch
* June	Weisse/Weizen
July	Steam Beer
August	Pils/Cream Ale (Summer Bash)
* September	Oktoberfest/Marzen
October	Belgian Ales
* November	Speciality Beer
December	Holiday Beer (X-mas Party)

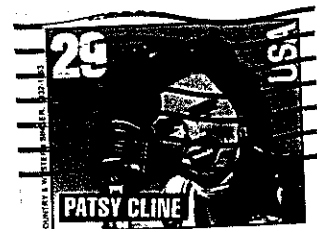
* AHA Club Only Competition Beer's

Hey, February is Bock month! Let's have a good turnout with plenty of **HOMEBREWED** Bock beer's. Remember to drop off your entries by February 13th at the normal places. Our club's best effort will be sent to the AHA's "Bock is Best" competition in March. If you think your brew is worthy, be sure to save at least 3-12 ounce brown, longneck bottles.

For all you Dead Beats (me included). Pay your dues. Dues not paid by March 1st means no more newsletter thereafter.

Several members have asked for a Question & Answer column in our newsletter. I'm willing to track down your toughest homebrewing questions. Please submit your questions in writing at meeting night.

February's meeting will cover some homemade-homebrewed All Grain mashing equipment. Fabrication and usage will be covered during the meeting.



Larry Simonson
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Grand Rapids, MI 49506