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Amateur Brewer

NEWSLETTER

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BOOK REVIEWS

Burch, Byron, Quality Brewing, A Guidebook for the Home Production of fine Beers, (Third Ed.), 1980: San Rafael CA, Joby Books. 56pp, Illus. \$2.50 available at most supply stores, or publisher POB 2063, San Rafael CA.

This is somewhat improved from the second edition, although I don't think you need to buy it if you have a copy of the second edition already. The major difference seems to be that the basic recipes call for the larger size malt extracts (3½-lb., 1.6-kg) sizes now available in supply stores. Sugar content is reduced by one pound, and citric acid is also reduced from one to one-half teaspoon.

If I were nitpicking I'd wonder why Byron chooses to retain this ingredient. I'm sure he hasn't arranged some sort of monopoly on "sour salt" (as it used to be called) from his GREAT FERMENTATIONS brew supply store, and indeed nobody seems to know just why sour salt is so special. We do know that all of the old recipes called for citric acid, and Byron suggests that the reason is to be sure that the pH is kept low. A half-teaspoon (2.5-gm) in 6-gallons would not seem to accomplish much in this regard. At any rate I really DON'T want to nitpick, I have always liked his book and I've always found it to be a valuable part of my own library.

The new photographs (6 pages) are nice, too. I wish I could afford a beautiful stainless brew kettle. Quality Brewing was the first book I reviewed in our Amateur Brewer No. 1, way back in January 1977, and it is still a good choice for folks just beginning to brew, who want to pursue the best methods. In 1977 I said, "The information is timely and well presented....(and) will sit well in any home brewer's library." I still feel that way.

f.e.

SUCCESSFUL BREWING AND BEYOND

I just got back from the University of California Davis Campus, where I attended the Seminar: Successful Brewing and Beyond. The seminar was presided over by Alan Toby (Wine and the People, Berkeley), and Larry Lapsley a Berkeley Home Brewer. These two not only provided significant contributions, but kept things rolling. The day started at 8:30 am, with presentations on brewing materials (Steve Ghiglieri), his advice about hops, for example, they deteriorate quickly. MY advice to you is order

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SEASONS
& GOOD

GREETINGS,
BEER!

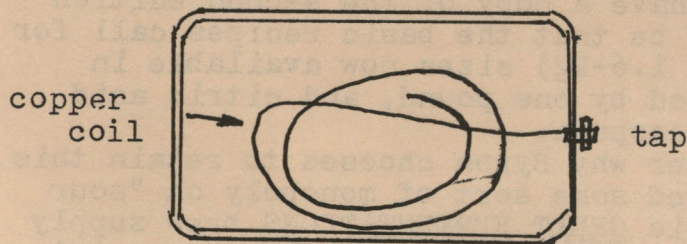
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PRACTICAL HOME BREWING

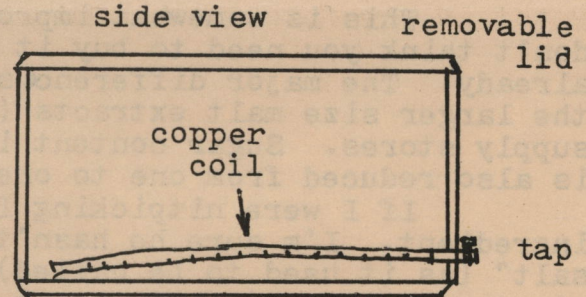
Two of the more fascinating presentations covered practical grain brewing from two different home brewers; Guy Pawson and Larry Lapsley.

Guy Pawson is owner and proprietor of International Brewing Supplies, 387 Los Paltos Dr., San Fransisco, CA, 94127. Guy is a strong believer in two things: you should brew all-grain beers right from the start, and you should keep very careful records. He hails from Helston, Cornwall, near the Southwest tip of England and he's naturally a strong advocate of the production of ales. He uses Dave Line's single-step infusion-mash-in-a-picnic-cooler, with some modifications. The cooler is fitted with a copper coil ($\frac{1}{2}$ -inch), laid on the bottom. The coil has hacksaw strokes at 1-inch (25-mm) intervals on it's underside. The coil terminates at the cooler's tap. A plastic hose is extended from the tap to draw-off the sweet wort.

Picnic Cooler--top view

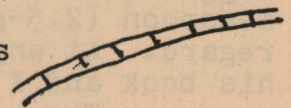


side view



Coil Detail
(bottom view)

Hacksaw strokes
at 1"
intervals
forming slots



The copper coil eliminates the need for a false bottom to hold the grain bed. Guy pointed out that "good" beer is what YOU like, and that you should brew for yourself. Guy brews all-grain, all-malt beers because he feels they are easy to do, and the results are high quality beer everytime, without the dreadful malt-extract tartness to mar the taste.

He brews, using about 2-lb malt per gallon of beer (25-gm/liter). He grinds his grain in a Corona hand mill, available from many health food stores. (You can also use a Quaker City Hand Grain Grinder (from the Next Whole Earth Catalogue) at \$19.95 from Nelson & sons, Inc., POB 1296, Salt Lake City UT 84110, or an electric Mil-Rite Flour Mill, \$230 from the Retsel Corp., Box 47, McCannon, ID 83250). The grinder discs are set about 1-1.5mm apart (.04-.06 Inch, about a sixteenth). The ground malt is mashed-in with about half the water, while the other half is reserved for the sparge.

Water is heated to about 170° (77°C) and added to the picnic cooler (which has not been preheated), then the ground grain is added, lowering the temperature to a proper 155°F (68°C) for the mash. The insulated picnic cooler loses only about 2°F (1.1°C) per hour, and the conversion takes place over about an hour or an hour and a half. During that time the remaining half of the water is heated to 170°F, and placed in a second picnic cooler until conversion. When conversion is complete (as shown by the iodine test: add a drop of iodine to a drop of wort, and if the color remains the same, conversion is complete, if it turns blue,

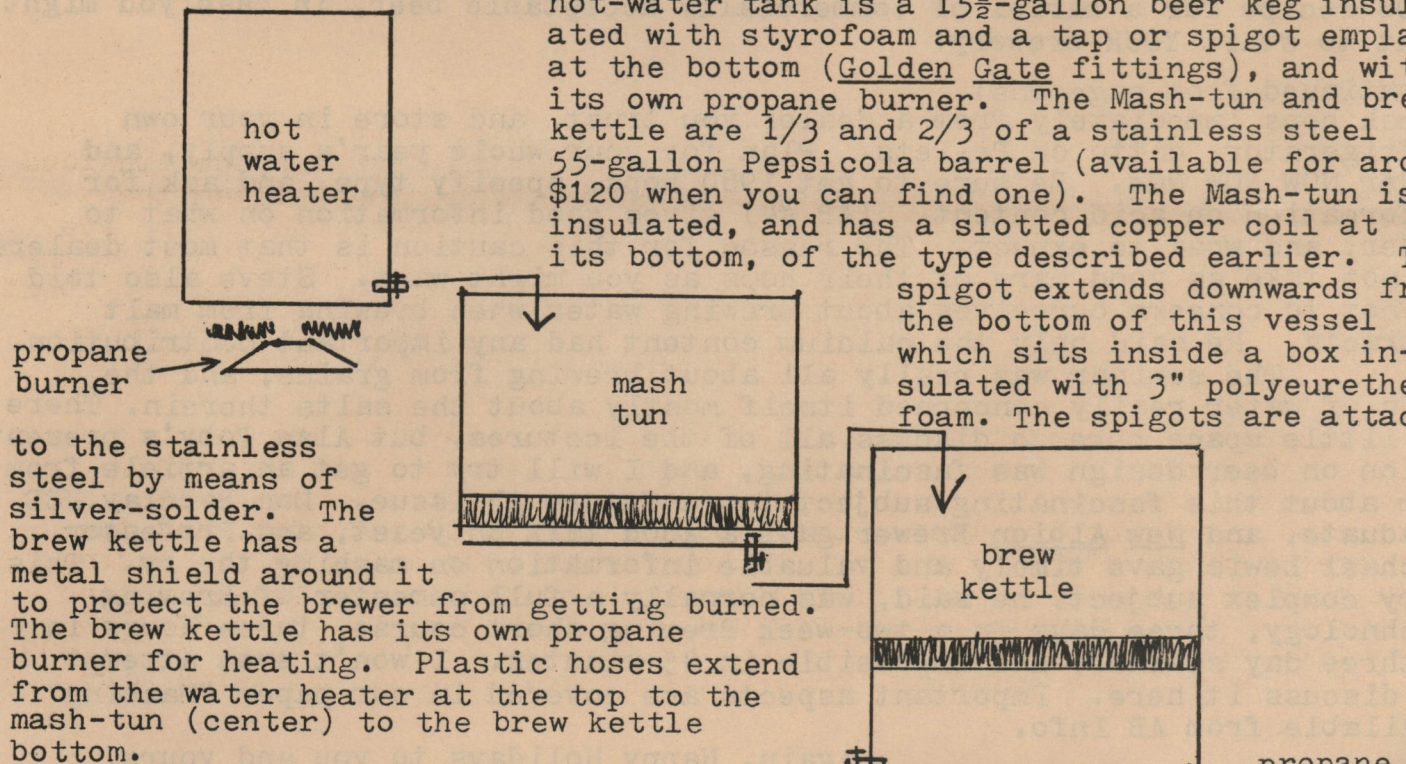
there is still some unconverted starch remaining in the mash), the first wort is drawn off and returned to the mash until the draw shows brilliant and clear wort. When the wort shows clear, it is drained into the brew kettle. When the liquid level drops to that of the grain bed in the picnic cooler, sparging is begun. Guy outlined an interesting alternative to sparging, a double mash system, where the mash is drawn-off, and then the sparge water is added at 170°F, allowed to stand for an hour, and again drawn off, as usual, into the brew kettle.

Another interesting feature of Guy's equipment is his sparger, which is a plate rinser (kitchen sink variety) attached to the second picnic cooler's spigot. The second cooler is placed on an elevated platform or table to sparge the mash. The beer wort is boiled with hops for about an hour and a quarter or an hour and a half or so.

The most interesting piece of equipment he showed us was his heat exchanger, used to quickly cool the hot wort prior to adding the yeast in the fermentor. This heat exchanger is a twelve foot (3.6-m) stretch of 1/2-inch copper tubing encased in plastic garden hose. The tubing is first sterilized with Cascade dishwasher soap and hot water, (which is again repeated just prior to each use). After sterilizing it, Guy fed the copper tube (lubricated with Ivory Liquid to facilitate movement) into the 12-foot plastic garden hose, until it was completely encased. The hose/copper tube was then formed into two loops, taped for stability, and double outlets are attached at each end. Cold water is run thru the hose; beer thru the copper tube. The once hot beer wort arrives in his primary fermentor, cool and ready for yeast.

Larry Lapsley, co-host in the seminar, and a Berkely home brewer, presented quite a different side of home brewing--one seldom seen. Larry and his partner have a "permanent" brewing set-up, which they were kind enough to assemble at the lecture hall for all to examine. This brewery produces a 30-gallon (114-liter) batch and they brew about once a month.

The brewery is arranged from top to bottom as shown here. The hot-water tank is a 15 1/2-gallon beer keg insulated with styrofoam and a tap or spigot emplaced at the bottom (Golden Gate fittings), and with its own propane burner. The Mash-tun and brew kettle are 1/3 and 2/3 of a stainless steel 55-gallon Pepsicola barrel (available for around \$120 when you can find one). The Mash-tun is insulated, and has a slotted copper coil at its bottom, of the type described earlier. The spigot extends downwards from the bottom of this vessel which sits inside a box insulated with 3" polyurethane foam. The spigots are attached



to the stainless steel by means of silver-solder. The brew kettle has a metal shield around it to protect the brewer from getting burned. The brew kettle has its own propane burner for heating. Plastic hoses extend from the water heater at the top to the mash-tun (center) to the brew kettle bottom.

The brewing cycle starts at 7 am on Saturday when the hot water tank is filled with 15-gallons of water, and then, after lighting-off the propane burner, they grind the malt using about 2-lbs/gallon (60-lbs per brew). The now hot water is run into the mash-tun at 170°F (77°C), and the ground malt is added, which will, when properly mixed, lower the temperature to the 150-155°F (66-68°C) range. Now the hot water tank is filled again, and the water heated for sparging (170°) again. The mash is allowed to stand until conversion which takes about an hour and a half. This is a "beer break" for the boys. When conversion is complete (starch-test), the sweet wort is drawn-off into a clear container, and returned to the mash-tun until it runs clear. Then it is allowed to run into the brew kettle. Sparging is commenced when the liquor level is down to about half-inch over the grain bed. Keep the level there during sparging. When there is just about two gallons of wort in the brew kettle, the propane burner under it is lit-off in true brewing tradition, so that the wort is brought to a boil at about the same time that it completes its flow into the kettle. Fresh hops are added and the wort is boiled in the usual fashion. During that time the water for sparging the hops is heated. At the end of the boil, the wort is allowed to settle, and is then drawn-off until clear, and transferred to the fermentor, via a heat exchanger similar to that designed by Guy Pawson (see above). By four pm, the beer has been pitched, and the day's work done. Relax and have another homebrew.

...AND BEYOND.

Perhaps the most interesting part of the day's lectures were the "...and beyond." segment. David Morris, Bread Garden Bakery (Berkeley) owner, who plans to open a commercial brewery--the Berkeley Brewing Co--talked of the groundwork necessary before starting a brewery, and Jack McAuliffe, the father of ultra-small brewing in this country gave a fascinating talk about his trials and tribulations ("Brewing is a capital intensive industry.") We'll bring you that part of the show in February's Amateur Brewer Newsletter No. 7-3. We'll round-out that letter with a good 1908 recipe for a barrel of commercially acceptable beer, in case you might want to start YOUR brewery!

(continued from page one)

fresh hops immediately from a dealer you trust, and store in your own refrigerator, ditto on Pellets. Plan for your whole year's supply, and order NOW NOW NOW. Be sure to get 1980 hops, specify type, and ask for information on acid content. (AB #4) gives good information on what to order, and what to expect. The reason for this caution is that most dealers do not take as good care of their hops as you might want. Steve also told us not to concern ourselves about brewing water when brewing from malt extracts. He said only the calcium content had any important contribution.

The seminar was really all about brewing from grains, and the role of water really concerned itself mostly about the salts therein. There is little space here to discuss all of the lectures, but Alan Toby's presentation on beer design was fascinating, and I will try to get an article from him about this fascinating subject for a future AB issue. Don Barclay, UCD graduate, and New Albion Brewer gave a good talk on yeast, and Professor Michael Lewis gave timely and valuable information on mashing the ry. This very complex subject, he said, was normally a full semester of Brewing Technology, three days in a two-week Brewing short course, three hours in a three day seminar, and impossible in 45-minutes. I won't even attempt to discuss it here. Important aspects are covered in our paper "Mashing" available from AB Info.

Again, Happy Holidays to you and yours,

Fred Eckhardt