



# The Barleycorn Press

Monthly Newsletter Published by the Green Mountain Mashers of Vermont

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## Ask Mr. Lager by Greg Noonan

**E**very month (give or take) Greg Noonan will answer one or two questions from members of the Green Mountain Mashers. Anyone who has questions for this column should email them to me at [t\\_cropley@yahoo.com](mailto:t_cropley@yahoo.com).

1) What are the factors in achieving high extraction efficiency for all grain brewing?

Crushing, mashing and runoff/sparging practices all affect extraction efficiency.

If malt is crushed too coarsely, starch granules, especially in the hard ends of the grain, may not be hydrolyzed. If it is crushed too finely and the mash 'sets', some extract will be trapped in the concrete-like paste of the set mash.

If the malt is unevenly wetted during mashing in and 'balls' of malt dough form, they will trap extract unless they are broken up. To some extent, the temperature and thickness of the mash also affect efficiency, although these more directly affect the fermentability of the wort than its specific gravity. pH may have more of an effect; if it is below 5.0 or above 5.5, mash efficiency will be reduced, because the enzymes will be retarded by the improper pH.

Runoff is probably of the greatest concern to all brewers trying to maximize extract efficiency. In larger commercial mash tuns, evenly rinsing the extract out of all parts of the mash is a greater problem than it is for homebrewing volumes, but it is something that needs to be paid attention to. Gently breaking up the grain bed at least two or three times

during sparging, and maintaining 1/2" to 2" of sparge liquor above the grain bed during runoff are the best strategies for getting even percolation of the sparge liquor through the grain bed.

When you are dumping out your spent grains, look for darker, shiny pockets of grain within the mash that indicate retained extract. If you see any, you need to pay more attention to evenly rinsing the grains. Every brewer can conduct a simple, empirical extraction efficiency test when they are brewing - chew samples of the spent grains after sparging, taken from several places in the lauter bed. Trapped sugars taste sweet; trapped starch tastes starchy, and trapped dextrins will release sweetness as your saliva breaks them down while you are chewing the grain sample. If you taste any sweetness or starchiness

at all, you are not maximizing extract efficiency from your mash.

1) How much effect does pH have in mashing and sparge water?

Lots, especially on beer flavor and extract efficiency. The success of any mash is most dependent on proper temperature and acidity. Grain brewers all pay attention to the mash temperature; too few pay attention to its acidity. The pH optimum for alpha amylase is 5.7; for Beta amylase it is 4.7. A high mash pH, like a high mash temperature, favors dextrinization at the expense of saccharification to fermentable maltose and glucose. If your brews consistently produce beers that are sweeter than they ought to be, look at your mash pH. Is it high?

Generally speaking, a 'high' mash pH is anything above pH 5.3. Ideally, it should be 5.2 during saccharification. During sparging, the pH of the mash runoff should never be allowed to rise above 5.8, and really should be kept below 5.5. Higher alkalinity progressively increases astringency and haze in the runoff and in the finished beer.

I learned another effect of acidity in brewing from Jim Koch of Boston Beer Company. While admiring the flavor of a Geary's Pale Ale, he commented that the beer had a very "bright" flavor, which he attributed to a well-controlled mash pH. He made the case that beers made from a high pH mash always taste "dull" and "muddy". Sometime later, I conducted my own survey of his assertion, rating the "brightness" of beers flavors and then doing a pH reading of

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the beer. The pattern was clear - the lower the pH of the beer, the brighter its flavor. The differences were dramatic.

It is very easy to test mash acidity with pH papers. If your mash pH is high, it is

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## Next Meeting - May 12th at Jim and Mel's Place in Hinesburg

**T**he next meeting of the Green Mountain Mashers will be on Monday May 12th at Jim Silvia and Melissa Levy's house in Hinesburg. The meeting will start around 7pm. We will be discussing doing a club brew (BYO Equipment).

Take Rt 116 or Rt 2A toward Hinesburg. Go south on Rt 116 from Rt 2A. Our street is about a mile south of Rt 2A on the left. Once you see the Burnett's Scrap Metal place with the metal fence on the left, look for our street. Take a left on Billings Farm Road. Go to the end, where you'll see a driveway and a sign that says "345, The Ledges, Private." Go to the end and park. If there's not enough parking, people can park at the beginning of the driveway in the circle.

The phone # is 482-7400. 🍷

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easy to learn how to manage it using lactic acid. Add a couple of drops of 10% lactic acid to your brewing liquor for your next brew. If the mash pH is still too high, add a few more drops next brew. Repeat the moderate increases until you dial in a 5.2-5.3 pH mash. Just remember to decrease acid additions when you brew darker beers, because dark malts themselves lower mash acidity. You are very likely to brew better beer if you control mash acidity. 🍷

**Don't Forget to Bring  
Some Snacks and three  
Homemade Beverages  
to the mtg. If You  
Don't Have Any Home-  
made Bevs, Please  
Bring Three Good/  
Unique Commercial  
Beers.**

## Your Cooking With Beer: Beer-Infused Fare for Cinco de Mayo!

by Ruth Miller

**C**oming up just after the homebrew competition on May 5th is Cinco de Mayo, a holiday celebrated more to boost Corona and Dos Equis sales in the US than an actual holiday in Mexico. We like to think of it as "Mexican Independence Day", but in fact, that actual holiday is celebrated on Sept. 10th in Mexico. Ahh, the powers of marketing in America!

*No hay problema!* Some of us here in the states are more than happy to celebrate Cinco de Mayo with our *compadres de cerveza*, mainly as a way to consume a lot of great Mexican food, beer & margaritas on a spring day with friends - I sure don't need much of an excuse, do you? *Bueno!*

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## Staff Box



The Barleycorn Press is a monthly publication of the Green Mountain Mashers Homebrew Club. The Barleycorn Press appears in the final week of each month. **Contributions are due by the 25th of the month of publication or two Thursdays prior to the next meeting (which ever comes first).** Please send contributions via e-mail (preferable) or send on a 3.5" IBM compatible diskette (hard copy as a last resort) to:

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Contributions on any subject even remotely associated with the brewing and/or enjoyment of beer and related beverages are happily accepted by the editors. The editors reserve the right to edit any contribution as a function of available space, while making every attempt to maintain its integrity. The views expressed by contributors to the Barleycorn Press are not necessarily those of the editors or of the Green Mountain Mashers Homebrew Club.

This publication is made available free of charge to all dues paying members of the Green Mountain Mashers. Subscriptions are available to all other interested parties at \$7.00 yearly (US funds).

Note: The yearly dues of \$10 should be paid by the end of January. Please mail your check or money order made out to the "Green Mountain Mashers" to Treasurer Lewis Greitzer at the following address:

**Lewis Greitzer**  
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**Competition set-up begins at 8am so all Mashers who are working the morning session should be at the Ethan Allen Homestead at 8am. If you have any questions, please contact Anne Whyte at: (h) 879-6462 (w) 655-2070 (email) vtbrew@together.net**

## Green Mountain Masher Calendar of Events

Date	Event	Information
5/3/03	Green Mountain Homebrew Competition	Anne Whyte (h) 879-6462 (w) 655-2070 (email) vtbrew@together.net
5/12/03	GMM May Mtg - Jim Silvia and Melissa Levy's - Focus: discussion of a possible club brew to be held at Jim and Mel's (brewers BYO Equipment)	Melissa and Jim (h) 482-7400 (email) jim@vt.bitxbit.com OR melissa@vt.bitxbit.com
5/24/03	"All that Glitters is Not Old" Club-Only Competition	Entries Due May 12-22, 2003. Judging will be held May 24, 2003 Category 11 English & Scottish Strong Ale (See Page 8 of Apr 03 Newsletter for more details)
6/13/03	GMM June Mtg - Friday night Barbecue at Monk's house - Grillables and pot luck dishes made with beer. Last meeting until Fall (September?).	Rich Evans (h) 899-3006 (email) monk@together.net

**Please contact Tim at the phone # or email address noted below to add items to the Masher Calendar**

Please contact Tim Cropley at (802) 434-7293 or by email at [t\\_cropley@yahoo.com](mailto:t_cropley@yahoo.com) if you have any beer events that you think the membership would like to know about. It is our hope that we will also list other regional competitions as they are announced. We also hope to list AHA sponsored Club Only competitions in an effort to remind people to consider bringing beers that fit the competition style to club meetings so that the membership can pick one for entering.

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Below is a very traditional recipe for *cabrito* (milk-fed baby goat) marinated in beer and grill-roasted in the method called "*al pastor*", or shepherd-style, indigenous to Nuevo Leon where goats and sheep are more abundant than the local beef cattle are farther north in the Sonoran region. Authentically, it's done over an open fire on a spit, but a grill, or even better one with a rotisserie attachment works great. The addition of mesquite-wood chips to the fire makes it even more authentic. The likelihood of you locating *cabrito* around here are practically nil (believe me, I've tried) but I've done this dish successfully with lamb leg, either bone-in or boneless. I've had *cabrito* in Arizona, and the taste is quite similar to lamb. To go with, a recipe follows for "drunken beans" that are a popular twist in Mexico from the standard re-frieds. By the way, Mexican oregano is considerably less pungent

than Italian or Greek varieties. If you can't locate it, use its close cousin marjoram instead for the more delicate flavor required.

It takes at least 24 hours to pre-marinate the lamb, and 2.5-3 hours to cook it over a slow fire, so take that into account, then fire up that grill and... *Vamos!* (Let's go!)

### ***Cabrito al Pastor en Cerveza***

1 lamb leg, between 3-5 lbs. (boneless or not).

#### Marinade

1 bottle Mexican beer (I prefer Negro Modelo or Dos Equis)  
1 medium onion, minced  
1/4 cup vegetable oil  
juice of 2 limes  
1 Tbsp Worcestershire sauce  
1 Tbsp dried oregano, pref. Mexican  
1 tsp. ground cumin

2 tsp. salt  
1 large, heavy-duty zip-lock plastic bag

As mentioned previously, put the marinade together at least 24 hours before you're ready to start grilling. Pour it into the bag and seal the lamb in, expressing all the air out so it will cling closely to the meat. Put in fridge until next day.

On the day you're ready to grill, take the lamb out, pour off the marinade into a saucepan to reduce to a sauce for later, and let meat sit at room temp for half an hour so it will cook more evenly. Soak a big handful of mesquite chips in water for at least 20 min. so they will smoke awhile, not burn up quickly. Get your gas or charcoal grill going, and for charcoal wait until white ash forms over all and then bank them to one side. The lamb will rest on the opposite side of the grate using indirect heat. You must have

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a lid for your grill for the long, slow-cooking this requires, and a meat thermometer sure helps. Or, if you have a thermometer that can read the temp inside the grill, you're looking to maintain a range of 300-350 degrees. You will need to periodically add charcoal a few chunks at a time to maintain this (this is why I prefer the ease of gas, but the taste isn't the same, I must admit.) Put half the mesquite over the coals or near the burner, and put the meat on the opposite side. Open the dampers, and close the lid. Every half-hour or so, turn & baste with the marinade, but quickly so as not to lose too much heat. At 45 min. intervals, add more charcoal and mesquite to keep things going. After 2 hours, put a meat thermometer in the thickest part of the leg (away from the bone) and keep it going until you reach about 160 degrees, depending on how well-done you like your lamb (that's medium.)

Meanwhile, boil the remaining marinade and reduce it by a third. Take the lamb off & let stand for 10 minutes before slicing it thinly & dousing it in the sauce. Serve with warmed flour tortillas, salsa (green or red) and guacamole. Have some beans on the side.

*Que bueno!*

### ***Frijoles Borrachos* - Serves 6-8**

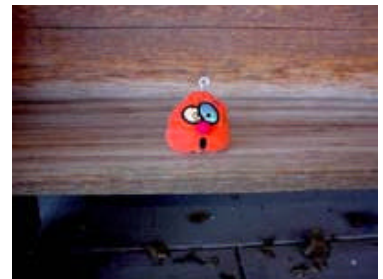
2 cups dried pinto beans  
5 cups water  
2 12-oz bottles light Mexican beer  
4 oz. salt pork, chopped OR 1 Tblsp. oil  
1-1/2 medium onions, chopped  
6 garlic cloves, minced  
1 Tblsp. cider vinegar  
2 tsp. dried oregano, preferably Mexican  
1 tsp. salt, or to taste

Pre-soak the beans in water the night before, then pour off the soaking water when ready to cook. Simmer them (uncovered) in fresh water for at least 2 hours (or you can use a pressure cooker

if you have one to speed things up) with all the above ingredients except salt. It usually takes at least that long to get them soft enough. Keep adding just enough water to barely keep them covered. When tender, take out a cup of them, mash them, and return them to the pot for a thicker body. Season with salt and serve warm with some quality hot sauce. NOTE: Even better re-heated, so consider making them in advance.



**“Oh No !!!” Don’t miss the  
Green Mtn Homebrew  
Competition - be there by 8am.**



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