

After reading many comments on the problems of using BeerSmith to calculate correct mash- and sparge-water in the Grainfather All-Grain System and a lot of tinkering, I believe I have come up with a set of changes to make within BeerSmith to exactly the figures derived from the formulas found in the Grainfather operators manual. The comments of David M. -- http://www.forum.realbeer.co.nz/forum/topics/the-grain-father?commentId=1500433%3AComment%3A210609&xg_source=activity -- and the postings by Cameron Browne and Andrew Hammond on the Grainfather Facebook forum -- <https://www.facebook.com/groups/grainfather/files/> -- put me on the right track, and some trial and error provided the needed refinement. One of the key changes turned out to be setting the Deadspace in the equipment profile at 0.90 gallons (3.41 l.), checking "Adjust Mash Volume for Deadspace", and setting "Top Up Water for Kettle" to 0.90 gallons (3.41 l.) instead of the 0.86 suggested by David M.

Changes need to be made in three different areas of BeerSmith:

- 1) Go to Options>Advanced and change the Grain absorption from 0.96 to 0.8.
- 2) Go to Profiles>Equipment and click on "Add Equip" and enter the following information
 - Give it a name
 - Brewhouse Efficiency: 75%
 - Hop utilization Factor: 100%
 - Mash Tun Volume: 7.93 gals. / 30.02 l.
 - Mash Tun Weight 8.82 lb. / 4 kg.
 - Mash Tun Specific Heat : 0.12
 - Lauter Tun Deadspace: 0.90 gal. / 3.41 l.
 - Top Up Water for Kettle: 0.90 gals. / 3.41 l.
 - Uncheck Calculate Boil Vol Automatically
 - Boil Volume: 7.40 gals. / 28.01
 - Boil Time: 60 minutes (you can change this as you like)
 - Check Use boil off as an hourly rate
 - automatically calculated
 - automatically calculated (should be 7.2 %/hour)
 - automatically calculated
 - Cooling Shrinkage: 4%
 - automatically calculated
 - Loss to Trub and Chiller: 0.53 gals. / 2.01
 - Top up water: 0.00
 - Batch Volume: 6.08 gals. / 23 l.
 - Fermenter Loss: 0.40 gals. / 1.51 l.
 - Bottling Volume (w/o starter): automatically calculated
- 3) Go to Profiles> and choose one of the Temperature Mash profiles and make the following change (or click on Add Mash and create a new one based the temperature profile of your choosing): Double click on the Temperature Mash profile you prefer and then double click on the line that reads "Add ___ qt of water at ___ F." and change the value of "Water/Grain Ratio" from 1.250 to 1.360 qt/lb (for metric, multiply the original by 1.088).

That should do it. Let me know if you don't get absolutely the same values from BeerSmith as the calculators produce. I think I have listed all the possible changes, but I have been tinkering with this for a while, and I didn't always remember what the starting values might have been.