BREWSHEET v3.4 (2014-12-14)

user input
calculated

Brew			
Name:	Honey Ale		
Brew Date:	2020 April 11	Collected (gal):	5.50
Rack Date:		Racked (gal):	
Keg/Bottle Date:		Kegged/Bottled (gal):	
Estimated		**Actual**	
ABV (%):		ABV (%):	
OG (SG):	1.060	OG (SG):	1.050
FG (SG):		FG (SG):	
IBU:	28.5	IBU:	31.4
SRM:	14.6	SRM:	14.6
IBU/Gravity Ratio:	0.47	IBU/Gravity Ratio:	0.63

Grain	Pounds	Potential	SG Share	Color	% Bill
Pale Malt (2-Row) US	7.75	1.036	0.036	2.0	60.78%
Munich Malt 10L	2.25	1.035	0.010	10.0	17.65%
Caramel/Crystal 90L	1.25	1.034	0.005	90.0	9.80%
Honey	1.50	1.035	**0.010**	1.5	11.76%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Kent Golding	L	2.00	60	5.1%	25.4	80.00%
Kent Golding	L	0.50	15	5.1%	3.1	20.00%

Design Notes

Using RO water; so at dough-in, add:
1.5 ml lactic acid (88%)
2.2 g CaSO4 (calcium sulfate/gypsum)
3.3 g CaCl2 (calcium chloride)
1.2 g MgSO4 (magnesium sulfate/epsom salt)
0.55 g Ca(OH)2 (calcium hydroxide/slaked lime)
1.95 g NaHCO3 (baking soda)
At boil, add:
1.3 g CaSO4 (calcium sulfate/gypsum)
2.0 g CaCl2 (calcium chloride)
0.7 g MgSO4 (magnesium sulfate/epsom salt)
0.3 g Ca(OH)2 (calcium hydroxide/slaked lime)
1.2 g NaHCO3 (baking soda)
Target is 5.47 mash pH, 80 ppm calcium, 5 ppm magnesium, 25 ppm sodium, 75 ppm chloride, 80 ppm sulfate
Add honey after 3/4 fermentation is done – in the primary (heat first to 170F for 30 min).

Batch Variables and Calculations	
Batch Size (gal):	5.50
Grain Temperature (F):	69
Total Grain Weight (lbs):	12.75
Mash	
Mash Time (min):	60
Desired Mash Temperature (F):	155
Strike Water (gal):	5.62
Strike Temperature (F):	172
Mash Ratio (qts/lb):	1.76
Grain Absorption (gal):	1.59
Mash Volume (gal):	6.64
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	3.89
First Runnings (gal):	4.00
First Runnings Gravity (Brix):	15.40
First Runnings Gravity (SG):	1.060
Sparge	
Desired Sparge Temperature (F):	168
Sparge Water (gal):	3.41
Sparge Water Temperature (F):	172
Estimated Second Runnings (gal):	3.88
Second Runnings (gal):	3.76
Second Runnings Gravity (Brix):	5.60
Second Runnings Gravity (SG):	1.022
Estimated Preboil Volume (gal):	7.76
Estimated Preboil Gravity (Brix):	10.65
Preboil Volume (gal):	7.76
Preboil Gravity (Brix):	9.60
Preboil Gravity (SG):	1.037
Extraction Efficiency (%):	64%
Boil	
Boil Time (min):	60
Estimated Evaporation Loss (gal):	1.20
Hop Absorption (gal):	0.25
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.20
Actual Evaporation Loss (gal):	1.20
Original Gravity (Brix):	12.88
Batch Size Efficiency (%):	61%
Actual Efficiency (%):	61%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	62
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	3
Secondary Fermentation Temperature (F):	32
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	
Tertiary Fermentation Temperature (F):	
Final Gravity (SG):	
Temperature of Reading (F):	
Corrected SG:	
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	
12 oz. Bottles Required:	
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	2.35
Priming Sugar (oz):	
DME (oz):	
Forced Carbonation (lbs):	

System Variables	
Brewhouse Efficiency (%):	70%
Volume in Hoses (gal):	0.22
Volume in Wort Chiller (gal):	0.19
Volume in HERMS Coil (gal):	0.25
Mash/Lauter Tun Deadspace (gal):	0.14
Strike to Sparge Volume Ratio (%):	50%
Trub Loss (gal):	0.16
FWH IBU Factor (%):	10%
Strike Temperature Factor (F):	7
Sparge Temperature Factor (F):	4
Estimated Evaporation Rate (gal/hr):	1.20
Leaf Hop Absorption Ratio (qts/oz):	0.40
Pellet Hop Absorption Ratio (qts/ oz):	0.10
Cooling Losses (%):	4%
Hydrometer Correction (SG):	0.001

BJCP Style Guidelines		
Style:	Specialty Beer	
Code:	23A	
OG:		0
FG:		0
IBU:		0
SRM:		0
ABV:		0
CO2:	2.2-2.5	

Yeast Strain	
Yeast Strain:	
Type:	
Attenuation (%):	
Actual Attenuation (%):	
Fermentation Temp (F):	
Flocculation:	

Required Amounts	
Cell Count (billions):	
Vials (White Labs/Wyeast):	
Dry Yeast (g):	

Yeast Starter/Slurry	
Vials (White Labs/Wyeast):	
Date Yeast Produced:	
Yeast Viability (%):	
Yeast Growth Rate:	
Yeast Innoculation Rate (million/ml):	
Starter Volume Required (ml);	
DME Required (oz):	
Yeast slurry concentration (billion/ml):	2.5
Non-yeast Percentage (%):	20%
Yeast Slurry Required (ml):	

User Variables	

Batch Scaling				
Desired OG:	1.050	Total Weight (lbs):		11.04
Batch Size (gal):	5.50	Total Bill:		100.00%
Brewhouse Efficiency (%):	70%			
Grain	**Pounds**	**Potential**	**Color**	**% Bill**
Pale Malt (2-Row) US	7.72	1.036	2.0	70.00%
Munich Malt 10L	2.21	1.035	10.0	20.00%
Caramel/Crystal 90L	1.10	1.034	90.0	10.00%

Poundage		
Goal (lbs):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
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Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Amount (lbs | oz.f_oz):		
Needed (lbs | oz.f_oz):		

Hydrometer Correction		
SG:	1.048	
Temperature (F):	68	
Corrected SG:	1.050	

Gravity Calculator			
Brix:	11.40	12.88	
Specific Gravity:	1.044	1.050	
Degrees Plato:	10.97	12.32	

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

4/11: mash temp was 154F; took a few min to get to 155F.
Expecting lower gravity and efficiency due to honey not being added to the boil.
With 1.050 OG, anticipating 1.060 with the honey.