BREWSHEET v3.3 (2012-03-18)

user input
calculated

Brew			
Name:	The Brown-Noser		
Brew Date:	2012 October 20	Collected (gal):	5.50
Rack Date:		Racked (gal):	
Keg/Bottle Date:	2012 November 17	Kegged/Bottled (gal):	5.00
Estimated		**Actual**	
ABV (%):	6.9%	ABV (%):	6.5%
OG (SG):	1.066	OG (SG):	1.065
FG (SG):	1.013	FG (SG):	1.016
IBU:	65.1	IBU:	70.7
SRM:	19.8	SRM:	20.4
IBU/Gravity Ratio:	0.98	IBU/Gravity Ratio:	1.08

Grain	Pounds	Potential	SG Share	Color	% Bill
Northwestern Pale Ale malt	10.92	1.036	0.050	2.8	72.46%
British carastan	1.14	1.035	0.005	34.0	7.56%
Carapils/Dextrine	1.14	1.033	0.005	2.0	7.56%
Red Wheat	0.92	1.039	0.005	1.5	6.10%
Chocolate Malt	0.45	1.028	0.002	350.0	2.99%
Rice hulls	0.50	1.000	0.000	0.0	3.32%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Northern Brewer (US)	L	0.75	fwh	10.0%	21.1	10.71%
Northern Brewer (US)	L	1.25	70	10.0%	30.6	17.86%
Northern Brewer (US)	L	0.50	15	10.0%	5.9	7.14%
Cascade	L	1.00	10	8.8%	7.6	14.29%
Cascade	L	1.50	0	8.8%	0.0	21.43%
Centennial	P	2.00	dry	9.9%	0.0	28.57%

Design Notes

Mash at 154F for 30 mins; mashout at 165F for 15 mins; sparge at 170F for 45 mins.
Shift all hops after fwh by 10 mins to account for recirculation.

Batch Variables and Calculations	
Batch Size (gal):	5.50
Grain Temperature (F):	70
Total Grain Weight (lbs):	15.07
Mash	
Mash Time (min):	30
Desired Mash Temperature (F):	154
Strike Water (gal):	6.49
Strike Temperature (F):	171
Mash Ratio (qts/lb):	1.72
Grain Absorption (gal):	1.88
Mash Volume (gal):	7.70
Mash-out Temperature (F):	165
Estimated First Runnings (gal):	4.47
First Runnings (gal):	4.70
First Runnings Gravity (Brix):	16.00
First Runnings Gravity (SG):	1.062
Sparge	
Desired Sparge Temperature (F):	170
Sparge Water (gal):	4.00
Sparge Water Temperature (F):	177
Estimated Second Runnings (gal):	4.47
Second Runnings (gal):	3.90
Second Runnings Gravity (Brix):	7.40
Second Runnings Gravity (SG):	1.029
Estimated Preboil Volume (gal):	8.93
Estimated Preboil Gravity (Brix):	12.10
Preboil Volume (gal):	8.60
Preboil Gravity (Brix):	12.60
Preboil Gravity (SG):	1.049
Extraction Efficiency (%):	81%
Boil	
Boil Time (min):	100
Estimated Evaporation Loss (gal):	2.37
Hop Absorption (gal):	0.25
Volume Left in Kettle (gal):	-0.41
Actual Evaporation Rate (gal/hr):	1.47
Actual Evaporation Loss (gal):	2.45
Original Gravity (Brix):	16.87
Batch Size Efficiency (%):	69%
Actual Efficiency (%):	64%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	66
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	7
Secondary Fermentation Temperature (F):	68
Gravity After Secondary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Tertiary Fermentation (days):	3
Tertiary Fermentation Temperature (F):	32
Final Gravity (SG):	1.018
Temperature of Reading (F):	37
Corrected SG:	1.016
Target Fermentation for Diacetyl Rest (%):	
Target Gravity for Diacetyl Rest (SG):	
Calories per Pint:	217
12 oz. Bottles Required:	51
Carbonation	
Bottling Temperature (F):	
Volumes of CO2:	2.00
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):	1.42
Leaf Hop Absorption Ratio (qts/oz):	0.20
Pellet Hop Absorption Ratio (qts/ oz):	0.10
Cooling Losses (%):	4%
Hydrometer Correction (SG):	-0.001

BJCP Style Guidelines	
Style:	American Brown Ale
Code:	10C
OG:	1.045-1.060
FG:	1.010-1.016
IBU:	20.0-40.0
SRM:	18.0-35.0
ABV:	4.3-6.2%
CO2:	1.5-2.5

Yeast Strain	
Yeast Strain:	Danstar Nottingham (Dry Ale)
Type:	Dry Ale
Attenuation (%):	75-85%
Actual Attenuation (%):	75%
Fermentation Temp (F):	57-70F
Flocculation:	high

Required Amounts	
Cell Count (billions):	251
Vials (White Labs/Wyeast):	
Dry Yeast (g):	12.6
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:	1.066	Total Weight (lbs):		14.55
Batch Size (gal):	5.50	Total Bill:		100.00%
Brewhouse Efficiency (%):	70%			
Grain	**Pounds**	**Potential**	**Color**	**% Bill**
Northwestern Pale Ale malt	10.92	1.036	2.8	75.00%
British carastan	1.14	1.035	34.0	7.80%
Carapils/Dextrine	1.14	1.033	2.0	7.80%
Red Wheat	0.92	1.039	1.5	6.30%
Chocolate Malt	0.45	1.028	350.0	3.10%

Poundage		
Goal (lbs):	10.92	
Amount (lbs | oz.f_oz):	1	13.52
Amount (lbs | oz.f_oz):	2	3.98
Amount (lbs | oz.f_oz):	2	7.89
Amount (lbs | oz.f_oz):	2	0.31
Amount (lbs | oz.f_oz):	2	5.00
Amount (lbs | oz.f_oz):		0.02
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):	0	0.00

Hydrometer Correction		
SG:	1.065	
Temperature (F):	72	
Corrected SG:	1.065	

Gravity Calculator		
Brix:	15.50	16.87
Specific Gravity:	1.060	1.065
Degrees Plato:	14.69	15.91

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

Mashed at 154F for 45 mins instead of 30 mins.
Added 10 mins to boil.
11/3: dry hopped. 1.016 SG (6.5% ABV; 75% attenuation).
Just getting over bronchitis (smell is impacted).
Aroma is malty with a hint of chocolate and hops.
Flavor is nice and hoppy mixed with malt and roast; nice and bitter.
Quite dry at the moment (could be my muted senses).
11/17: first aroma is citrus hop quickly followed by malt and chocolate roastiness.
Flavor is hoppy and bitter that gives way to malt and roast.
Nice combination of malt and hops that make this an India Brown Ale of sorts.
12/16: nice brew; quite bitter (next time swap bittering hop with something better).
Aroma is hops and a bit of malt, roast, and chocolate.
Flavor is mostly hops with a bit of malt and roast.
Overall a good beer that should get better over time.
Consider swapping both flavor and aroma hops (including dry hop).
Maybe also add a bit more dark crystal or chocolate malt.
I think I'd take this down to ~50 IBUs.