BREWSHEET v3.4 (2014-12-14)

user input
calculated

Brew			
Name:	Flanders Brown		
Brew Date:	2016 July 16	Collected (gal):	5.00
Rack Date:		Racked (gal):	
Keg/Bottle Date:		Kegged/Bottled (gal):	
Estimated		**Actual**	
ABV (%):	5.4%	ABV (%):	
OG (SG):	1.052	OG (SG):	1.051
FG (SG):	1.010	FG (SG):	
IBU:	17.9	IBU:	19.8
SRM:	18.5	SRM:	19.8
IBU/Gravity Ratio:	0.35	IBU/Gravity Ratio:	0.39

Grain	Pounds	Potential	SG Share	Color	% Bill
Pilsner (2-Row) Germany	5.00	1.037	0.024	2.0	44.44%
Vienna Malt	3.00	1.036	0.014	3.5	26.67%
Munich Malt 10L	1.00	1.035	0.004	10.0	8.89%
Belgian aromatic malt	0.75	1.036	0.003	26.0	6.67%
Belgian Special "B"	0.75	1.030	0.003	220.0	6.67%
Unmalted Raw White Wheat	0.75	1.037	0.004	2.0	6.67%

Hop	Type	Ounces	Boil Time	Alpha %	IBU	% Bill
Hallertauer (GR)	P	1.20	120	4.4%	17.9	100.00%

Design Notes

Mash-in at 146F for 15 min; raise to 156F for 30 min; raise to 162F for 15 min; mash-out.
After racking previous batch, pitch on top of yeast cake.
Blend the two batches later to target sourness.
Can also use the oak chair leg in carboy method.

Batch Variables and Calculations	
Batch Size (gal):	5.50
Grain Temperature (F):	84
Total Grain Weight (lbs):	11.25
Mash	
Mash Time (min):	70
Desired Mash Temperature (F):	146
Strike Water (gal):	6.10
Strike Temperature (F):	159
Mash Ratio (qts/lb):	2.17
Grain Absorption (gal):	1.41
Mash Volume (gal):	7.00
Mash-out Temperature (F):	168
Estimated First Runnings (gal):	4.55
First Runnings (gal):	4.80
First Runnings Gravity (Brix):	14.00
First Runnings Gravity (SG):	1.054
Sparge	
Desired Sparge Temperature (F):	168
Sparge Water (gal):	4.09
Sparge Water Temperature (F):	172
Estimated Second Runnings (gal):	4.56
Second Runnings (gal):	4.30
Second Runnings Gravity (Brix):	4.70
Second Runnings Gravity (SG):	1.018
Estimated Preboil Volume (gal):	9.11
Estimated Preboil Gravity (Brix):	9.61
Preboil Volume (gal):	9.10
Preboil Gravity (Brix):	9.00
Preboil Gravity (SG):	1.035
Extraction Efficiency (%):	78%
Boil	
Boil Time (min):	120
Estimated Evaporation Loss (gal):	2.77
Hop Absorption (gal):	0.03
Volume Left in Kettle (gal):	0.00
Actual Evaporation Rate (gal/hr):	1.64
Actual Evaporation Loss (gal):	3.28
Original Gravity (Brix):	13.10
Batch Size Efficiency (%):	69%
Actual Efficiency (%):	63%
Fermentation	
Primary Fermentation (days):	14
Primary Fermentation Temperature (F):	70
Gravity After Primary Fermentation (SG):	
Temperature of Reading (F):	
Corrected SG:	
Secondary Fermentation (days):	90
Secondary Fermentation Temperature (F):	72
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:	2.00
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):	1.39
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:	Flanders Brown Ale/Oud Bruin
Code:	17C
OG:	1.040-1.074
FG:	1.008-1.012
IBU:	20.0-25.0
SRM:	15.0-22.0
ABV:	4.0-8.0%
CO2:	1.5-2.5

Yeast Strain	
Yeast Strain:	Wyeast 3763 (Roeselare Ale Blend)
Type:	Roeselare Ale Blend
Attenuation (%):	80-80%
Actual Attenuation (%):	
Fermentation Temp (F):	65-85F
Flocculation:	variable

Required Amounts	
Cell Count (billions):	198
Vials (White Labs/Wyeast):	
Dry Yeast (g):	10.0
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:		Total Weight (lbs):		
Batch Size (gal):		Total Bill:		
Brewhouse Efficiency (%):				
Grain	**Pounds**	**Potential**	**Color**	**% Bill**

Poundage		
Goal (lbs):	5.00	
Amount (lbs | oz.f_oz):	3	9.53
Amount (lbs | oz.f_oz):		
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):		
Needed (lbs | oz.f_oz):	1	6.47

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

Gravity Calculator			
Brix:	12.60		
Specific Gravity:	1.049		
Degrees Plato:	12.07		

Brix Ethanol Correction	
Original Brix:	
Current Brix:	
SG:	

Brewing Notes

Collected on top of the last batch; did not aerate (instead, let wort crash into carboy).