League Little Red Rooster (AG)

Red IPA (21 B)

Type: All Grain
Batch Size: 23.00 L
Boil Size: 28.50 L
Boil Time: 60 min
Final Bottling Vol: 22.00 L
Fermentation: Ale with Diacetyl Rest

Date: 13 Apr 2020
Efficiency: 75.00 %
Est Mash Efficiency: 81.5 %



Brewing Notes:
This beer has a fairly large dry hop addition which can cause what is known as 'dry hop creep'. This is where enzymes in the hops convert some normally non-fermentable sugars into fermentable ones. This can lower the final gravity raising the ABV as well as reintroduce diacetyl precursors (the target ABV is ~5%). One way to address this is to add the dry hops while the yeast is still quite active, bump the temp up, and let ferment completely which is the approach used in the instructions below. Another option is to let ferment fully, drop the temp to 5C and then dry hop for a shorter period (cold and short dry hop). The second option will prevent the ABV increase but, to ensure no additional fermentation in packaging (e.g., bottles), only do this if kegging.

1. If available, acidify the sparge water with the indicated lactic acid prior to heating to sparge temperature.
2. If flavour minerals are available, add to boil only as mash pH is taken care of with acid malt.
3. If available, add yeast nutrient and kettle finings 10 - 15 min prior to the end of boil.
4. Cool the wort to 80C, add the whirlpool hops and maintain 80C for 15 min. Once complete, cool the wort quickly to transfer temperature.
5. It is recommended that the yeast be rehydrated per the manufacturer's instructions. Pitch at 18C and maintain for 3 days then let rise to 20C.
6. Once the fermentation is near completion (~5-7 days), add the dry hops and raise the temp to 22-23C for a diacetyl rest. Maintain temp for another 5 days.
7. If possible, cold crash for a few days before packaging.
8. Carbonate to 2.6 - 2.7 volumes of CO2.

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
2.200 kg	Gladfield Ale Malt (6.0 EBC)	Grain	1	44.0 %	1.43 L
0.900 kg	Gladfield Aurora Malt (58.0 EBC)	Grain	2	18.0 %	0.59 L
0.900 kg	Gladfield Vienna Malt (6.8 EBC)	Grain	3	18.0 %	0.59 L
0.400 kg	Gladfield Red Back Malt (65.0 EBC)	Grain	4	8.0 %	0.26 L
0.225 kg	Gladfield Shepherds Delight Malt (300.0 EBC)	Grain	5	4.5 %	0.15 L
0.225 kg	Harraway's Rolled Oats (2.8 EBC)	Grain	6	4.5 %	0.15 L
0.150 kg	Gladfield Sour Grapes Malt (acid malt) (4.0 EBC)	Grain	7	3.0 %	0.10 L
1.60 ml	Lactic Acid (Sparge)	Water Agent	8	-	-

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 17.00 L of water at 72.0 C	67.0 C	60 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

Fly sparge with 16.51 L water at 76.0 C
Add water to achieve boil volume of 28.50 L
Estimated pre-boil gravity is 1.044 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
20.00 g	Columbus (Tomahawk) [15.10 %] - Boil 60.0 min	Hop	9	33.2 IBUs	-
6.40 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	10	-	-
3.30 g	Calcium Chloride (Boil)	Water Agent	11	-	-
0.50 Items	Whirlfloc Tablet (Boil 15.0 mins)	Fining	12	-	-
1.50 g	Yeast Nutrient (Boil 15.0 mins)	Other	13	-	-
30.00 g	Columbus (Tomahawk) [15.10 %] - Boil 1.0 min	Hop	14	20.8 IBUs	-

Steeped Hops

Amt	Name	Type	#	%/IBU	Volume
25.00 g	Amarillo [7.90 %] - Steep/Whirlpool 15.0 min, 80.0 C	Hop	15	2.4 IBUs	-
20.00 g	Centennial [11.50 %] - Steep/Whirlpool 15.0 min, 80.0 C	Hop	16	2.8 IBUs	-
20.00 g	Citra [13.80 %] - Steep/Whirlpool 15.0 min, 80.0 C	Hop	17	3.4 IBUs	-

Estimated Post Boil Vol: 26.00 L and Est Post Boil Gravity: 1.050 SG

Cool and Transfer Wort

Cool wort to fermentation temperature
Transfer wort to fermenter
Add water if needed to achieve final volume of 23.00 L

Pitch Yeast and Measure Gravity and Volume

Fermentation Ingredients

Amt	Name	Type	#	%/IBU	Volume
2.0 pkg	Safale American (DCL/Fermentis #US-05) [0.05 L]	Yeast	18	-	-

Measure Actual Original Gravity _____ (Target: 1.050 SG)
Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

13 Apr 2020 - Primary Fermentation (3.00 days at 18.0 C ending at 18.0 C)
16 Apr 2020 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
22 Apr 2020 - Tertiary Fermentation (5.00 days at 22.0 C ending at 22.0 C)

Dry Hop and Bottle/Keg

Dry Hop/Bottling Ingredients

Amt	Name	Type	#	%/IBU	Volume
30.00 g	Centennial [11.50 %] - Dry Hop 5.0 Days	Hop	19	0.0 IBUs	-
30.00 g	Citra [13.80 %] - Dry Hop 5.0 Days	Hop	20	0.0 IBUs	-
25.00 g	Amarillo [7.90 %] - Dry Hop 5.0 Days	Hop	21	0.0 IBUs	-

Measure Final Gravity: _____ (Estimate: 1.009 SG)
Date Bottled/Kegged: - Carbonation: Bottle with 155.90 g Corn Sugar