HERVEY BAY HOME BREW
beer, wine, spirits & accessories

Lager Brewing Tips

Thinking about brewing a lager style beer?

Here are a few tips to help ensure success on your first try.

1) Aerate your wort.
Purpose: To encourage a vigorous initial fermentation and complete attenuation of fermentables. Ensure a 'clean' flavour profile.

Procedure: Properly aerating your wort (by either shaking the fermenter vigorously, sloshing the chilled wort back and forth between two buckets, sloshing the water used to top up your wort, or pumping in pure oxygen through an aeration stone).

Yeast needs oxygen in the early stages of growth. But never after pitching yeast.

Consequences of disregarding: Sluggish fermentation, incomplete attenuation, flaws in flavour profile.

2) Pitch (lager) Yeast at 18-22℃
Purpose: To ensure a vigorous initial fermentation.

Procedure: Pitching active yeast into warm (18-22℃) wort encourages the yeast to begin the fermentation process right away. The more vigorous the initial fermentation (growth phase), the more likely complete attenuation will occur.

Reduce the temperature. Each strain of lager yeast has its own temperature range, find out what your choice requires. Most call for a range of 12℃.

Consequences of disregarding: Sluggish initial fermentation, increased diacetyl production.

3) Fermentation Temperature
Purpose: Achieve the optimal temperature range for each strain of lager yeast.

Procedure: As stated above, 12℃ is the usual temperature range for most ordinary lager yeast strains. After reducing wort from pitching temperature to cool fermentation, maintain the specified temperature using a reliable fridge controller.

Consequences of disregarding: Sluggish and/or no fermentation if fermented too cold, ale like flavour profile if fermented too warm.

4) Perform a Diacetyl Rest
Purpose: Allow yeast to remove diacetyl (buttery flavours and aromas) from the beer. Most diacetyl is created by the yeast in the early growth phase.

Procedure: After the cool primary fermentation, allow the wort to warm up to 16-18℃ for 24 hours near the end of fermentation. A diacetyl rest will reinvigorate the yeast culture so that it will metabolise diacetyl, removing it from solution. Reduce the temperature by 2℃ per day till you once again reach 12℃ test, till the sg is stable for at least 3 days.

Consequences of disregarding: Diacetyl in your beer! A buttery distortion of your beer's potential. Incomplete fermentation, possible contamination.

5) Lager your beer
Purpose: Achieve the crisp, snappy and clean flavour profile desired in lager beers.

Procedure: After the diacetyl rest, transfer the beer from primary to secondary (preferably a carboy or keg). Reduce from 12℃ to 1℃ or 2℃; try bringing it down a degree or two a day. Hold at 1-2℃ for 2 - 6 weeks. The longer the lager stage, the crisper and more mature your lager will taste.

Consequences of disregarding: Beer lagered for too short a period of time will have a 'green', immature taste.

6) Prime, Package and Store
Purpose: Carbonate lagered beer

Procedure: As beer lagers over a period of weeks, the yeast flocculates out of solution and becomes dormant. Stressed at a cold temperature and deprived of food, fresh yeast is required for bottling (This is obviously not a problem for Kegging). Prime and bottle as usual, adding creamed yeast to the bottle (alternately add one part in ten of a vigorously fermenting new batch. This procedure is called kraeusening because you add freshly fermenting beer to the aged).

Store at cellar temperature until carbonation is achieved. Refrigeration is nice, but not completely necessary. Avoid sudden temperature shifts. Keep away from heat and light!

Consequences of disregarding: Non-carbonated beer. Prematurely stale beer.