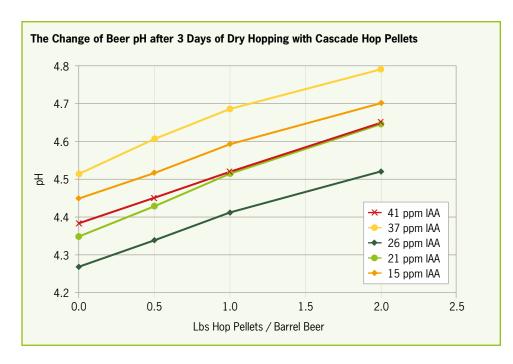


NEWSLETTER 05/2016 TECHNICAL SUPPORT

The Effect of Dry Hopping on Beer pH

Many craft brewers dry hop with as much as 1 to 2 lbs of hops per barrel of beer (approx. 380 g to 760 g per hl respectively). Dry hopping at these high levels causes an increase in beer pH. To investigate this further, several beers with different IBU's and different starting pH's were dry hopped with Cascade hop pellets at 0.5, 1.0, and 2.0 lbs/barrel.

The pH values of the beers were measured before and after dry hopping and in each case the effects were very similar: that is, the pH value increased by about 0.14 pH units per pound of hops added. The same increase in pH also occurred when CO_2 -extracted "spent" hop powder was added to beer. That tells us there is something in the vegetative material that's causing the pH of beer to increase.



More information can be found in the following publication "Humulinone Formation in Hops and Hop Pellets and Its Implications for Dry Hopped Beers"; John Paul Maye, Robert Smith, and Jeremy Leker (MBAA TQ vol. 53, no. $1 \cdot 2016 \cdot pp. 23-27$)

If you need any further information, please do not hesitate to contact us.

Simon MSteiner, Hopfen, Gmb M. S.S. Steiner Inc. Newsletter, May 2016

