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# HOP SCIENCE

KNOWLEDGE FOR YOUR SUCCESS

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**BARTH-HAAS GROUP**  
FOR YOUR SUCCESS

## MAY I INTRODUCE TO YOU HBC 438 AND HBC 682?

There are new hop varieties on the horizon, and so far they have thrilling names as HBC 438 and HBC 682. HBC stands for the Hop Breeding Company. HBC 438 exhibits in beer tangerine, coconut, tropical fruit, and stone fruit aromas with hints of cedar, mint, and cream. High alpha acid concentrations in HBC 682 (18-21%) make it an attractive bittering hop.. and who knows what HBC 682 might offer in terms of flavours! Interested in samples? Let us know!<sup>1</sup>

## WHY SPENT HOPS ARE SO VALUABLE

These US Researchers looked into general utilisation consideration of hops in dry hopping processes. They found that irrespective of method the average amount of soluble solids of hops in beer was about 33%. They also found that only 30% of alpha acids and 50% of hop oil components actually end up in the beer. So now we have the facts to what we have felt all the years, it is still a beautiful but wasteful process.<sup>2</sup>

## AGING HOPS CAN BE FLAVOURFUL!

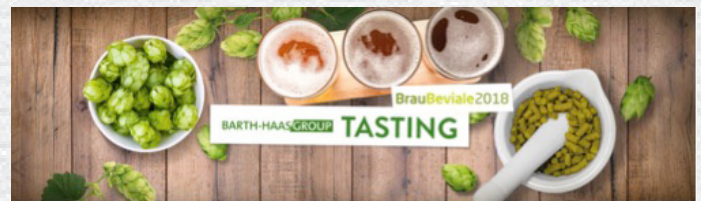
We know from other research in the past that oxidising hops can be beneficial for hop flavours in beer and increase the general fruitiness of hops in beer. Also these Chinese researchers came to this conclusion working with Simcoe in three different conditions: fresh, slightly aged and strongly aged. They presented very interesting data and found that both IPA and Lager brewed with slightly aged hops had the highest hop aroma compounds and similar sensorial quality as fresh hop. The oxidized hop compounds did not negatively affect the hop aroma. So maybe low HSI values are overrated?<sup>3</sup>

## USE PVPP TO CONTROL THE MOUTHFEEL OF BEER

These Japanes Researchers looked into hop derived polyphenols and where able to identify structures that have an impact on mouthfeel (fullness) of beer and bitter taste. Understanding the behaviour of these compounds, it became clear that the process step of filtration decisively influences the composition of polyphenols. Using different amounts of PVPP and times for the treatment these researchers found it is possible to influence the final mouthfeel of the beer.<sup>4</sup>

### REFERENCES:

1. Ferguson, M.: In search of the next big thing in beer flavor: a primer on the development of experimental hop varieties HBC 438 & HBC 682, Poster A060 at the Brewing Summit, August 2018, San Diego, and Poster M 041 at the Brewing Summit, August 2018, San Diego
2. Hauser, D.:The extraction efficiency of hop bitter acids and volatiles during dry hopping. Oral presentation 41 at the Brewing Summit, August 2018, San Diego, and Poster M 041 at the Brewing Summit, August 2018, San Diego
3. Cong, N.: Aging of hops and their effects on ale and lager beer flavor quality, A 014, oral presentation at the Brewing Summit, August 2018, San Diego
4. Asano, S.:Hop polyphenols contributing to fullness in beer and their control using polyvinylpyrrolidone (PVPP) A 018, oral presentation at the Brewing Summit, August 2018, San Diego



## EVENTS

Visit us at Brau!

We have prepared exciting hop flavours for you.

Please register at: <https://www.barthhaasgroup.com/de/registration?event=BrauBeviale>

