



HUMULUS LUPULUS

AND OTHER BITTER TRUTHS

Why differentiate between alpha and aroma when you can have both?

As with any product that stems from one and the same plant, but still has differences in its various forms, people try to fit hops into a frame so that they can be sorted and categorised more easily and so that fewer “mistakes” can be made when using them. Why is this?

The hop is thought to originate in Mongolia, from where it found its way to Europe and America. Today, hops are divided into five different subgroups:

- Cordifolius (Far East, Japan)
- Lupuldoides (Eastern USA, Central USA)
- Lupulus (Europe)
- Neomexicanus (Western USA)
- Pubescens (Midwest USA)

Lost track already? Well, don't give up, because there's more to come. In the meantime, an almost bewildering array of sub-categories has sprung up:

- Regional varieties
- Aroma hops
- Flavour hops
- Fine aroma hops
- Noble hops
- Dual-purpose varieties
- Bitter varieties
- High alpha varieties

And as if that wasn't enough, everybody puts the varieties they use into whichever of the various categories suits them.

You may feel entitled to ask yourself: What's the point? One person's regional variety may be what someone else calls noble hops, and someone else again may refer

to a dual-purpose hop as an aroma hop. Wait a minute – is that allowed? Of course it is. Any hop can be added in any way in the brew house or the fermentation cellar – without exception!

So how did these definitions come to be used?

Let's look back a little in hop history.

In the past, in various regions there were local (wild) hop varieties that quite simply became established there due to their agronomic and brewing characteristics. Today these varieties are referred to as “regional varieties”.

When these varieties were no longer found to be high-yielding or resistant enough, hop breeding began and all the other varieties that have followed are effectively “cultivars”. Through selective breeding, resistances from various wild hops were crossed into the new varieties which from then on were more resistant. Although hop breeding began around 1900, hops continued to be referred to in terms of regions rather than varieties. In the 1950s, wilt forced the Hallertau region to look for alternatives. The first successful cultivar to come from the Hüll institute was Perle (1978) after 50 years of breeding.

Actually, there is no distinction to be made between bitter and aroma varieties because it makes little sense. High alpha content or a special aroma note are quite simply breeding goals that are set, but not definitions that apply, or are intended to apply, to all hop varieties.



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So, what's all this about bitter and aroma varieties?

Ostensibly, anything with more than 10 % alpha is a bitter variety and anything below that is an aroma variety.

Why is this? Let's have a look at the alpha content in some flavour hops (only a small selection): Ariana - Citra - Mosaic - Hallertau Blanc - Comet - Ella - Galaxy. Nearly all of them have an alpha content of more than 10 per cent, and yet they are only used for aroma hopping.

Hallertau Perle, again, is a good example: it's what's known as a dual-purpose hop, meaning that it can be used both for bitterness and for aroma. But then, what hop doesn't that apply to?

Belgian scientists claim to have come up with a "new" definition of the term dual-purpose hop [1] for the simple reason that although certain hop varieties have such a high alpha content, they are only used for aroma purposes.

The hop is a wonderful product. It looks good and it gives our beer flavour and aroma - or both at the same time. It gives us aroma diversity, beer style sophistication and much more. What it doesn't like is to be Opigeon-holed. And yet we try to do so again and again. Why is this? We should simply be glad to have a plant that is so varied, that makes our beers so diverse and that offers us so many possibilities. How and where we add the hops depends on us (and of course the price) - not some rigid definition that we have to religiously observe.

[1] Kankolongo Cibaka M-L, Gros J, Nizet S, Collin S (2015) Quantitation of selected terpenoids and mercaptans in the dual-purpose hop varieties Amarillo, Citra, Hallertau Blanc, Mosaic, and Sorachi Ace. J Agric Food Chem 63:3022-3030