

<b>HOP CHARACTERISTICS</b>			
<b>IMPORTS</b>	<b>AVERAGE ALPHA</b>	<b>DESCRIPTION</b>	<b>USED IN</b>
<b>CHALLENGER (UK)</b>	6.5 - 8.5%	Bittering hop, Favorite of the British, Related to Northern Brewer	British ales/lagers
<b>HALLERTAUER (German)</b>	3.5 - 5.5%	Bittering and aroma hop. Mildly aromatic with a spicy fragrance.	Wheat/altbiers/pilsners/belgian ales/am ales
<b>HERSBRUCKER (German)</b>	2.0 - 5.5%	Pleasant spicy, earthy aroma.	Lagers/Whea/pilsners/American ales
<b>KENT GOLDINGS (UK)</b>	4.0 - 5.5%	English aroma hop. Mild with a floral aroma.	English pale ales/bitters/porters/stouts
<b>NORTHDOWN(UK)</b>	5.5 - 9.5%	Known for good bittering potential and very good aroma.	Pale ales/porters/stouts
<b>SAAZ (Czech Republic)</b>	3.0 - 4.5%	A fragrant and flavorful Czech hop very distinctive floral aroma.	Lagers/pilsners/Belgian ales
<b>SPALT (French)</b>	4.0 - 5.5%	Pleasant, spicy, aroma. Similar to Hersbrucker	German altbiers/amber ales.
<b>STYRIAN GOLDINGS (Slovenian)</b>	4.0 - 5.0%	Aroma and bittering hop, close relative of Fuggles.	Belgian ales/pale ales/brown ales/porters /stouts
<b>TARGET (UK)</b>	9.0 - 11.0%	A cross between No. Brewer & Kent Golding for bittering & aroma.	British ales/lagers.
<b>DOMESTIC</b>			
<b>AMARILLO</b>	6.0 - 9.0%	Aroma hop citrus-like character of Cascade with higher alpha.	Ales/lagers
<b>BULLION</b>	6.0 - 9.0%	Bittering hop with strong spicy flavors, black currant aroma	Dark ales/stouts.
<b>CASCADE</b>	4.5 - 7.0%	Aroma and bittering hop unmistakable grapefruit, citrus aroma.	Ales/lagers
<b>CENTENNIAL</b>	9.0 - 12.0%	Bittering hop known as a "super-charged" Cascade.	Medium to dark American ales
<b>CHINOOK</b>	12.0 - 13.0%	Distinctive, sharp bitterness, strong spicy aroma, piney, grapefruit	American ales/lagers
<b>CLUSTERS</b>	6.0 - 8.0%	Sharp, "catty" American hop contributes a clean, neutral bitterness.	Light and dark American ales
<b>COLUMBUS</b>	14.0 - 16.0%	Very pungent floral aroma, clean bittering properties.	Medium American ales.
<b>CRYSTAL</b>	2.0 - 4.5%	Newer variety with fine Hallertauer character. Ultra clean.	Light ales & all lagers.
<b>FUGGLES</b>	3.5 - 5.0%	Classic Eng. aroma hop, very versatile,spicier/stronger than E Kent.	All English beers/pale ales/brn ales/porters/stouts
<b>GALENA</b>	11.0 - 14.0%	Bittering hop, blends well with finish hop, bred in Idaho	Amerian ales/lagers.
<b>HALLERTAUER</b>	3.5 - 5.5%	Bittering and aroma hop. Midly aromatic with a spicy fragrance.	Wheat/altbiers/pilsners/belgian ales/american ales
<b>HORIZON</b>	11.0 - 13.0%	Smooth bittering properties, pleasant aroma, related to Nugget	Ales/bitters/pale ales/porters & stouts
<b>LIBERTY</b>	5.0 - 8.0%	Very spicy American substitute for Hallertauer	American and German ales & lagers.
<b>MAGNUM</b>	12.0 - 14.0%	Spicy, citrusy, super-high alpha bittering hop.	American strong ales.
<b>MT. HOOD</b>	4.0 - 7.0%	Aroma and bittering hop , mixture of Hallertauer and Liberty.	American and German ales & lagers.
<b>NORTHERN BREWER</b>	7.0 - 10.0%	Bittering hop, Halletauer derivation with rougher flavor than import	CA commons/dark English ales/German lagers
<b>NUGGET</b>	12.0 - 12.5%	High-alpha American bittering hop w/delicate,pleasant aroma.	Medium to dark American ales/lagers
<b>PERLE</b>	6.5 - 9.0%	Bittering hop of German origin with crisp, minty bitterness.	Lagers/wheats/pilsners
<b>TETTNANGER</b>	4.0 - 5.0%	Aroma hop known for mild floral aroma.	Suitable for premium Am.lagers/German lagers/wheats
<b>WILLAMETTE</b>	4.0 - 6.0%	American grown seedless version of Fuggles/slightly more spicy.	American and British ales.