



WILLAMETTE VALLEY HOPS, LLC

HOP VARIETY DATA SHEET

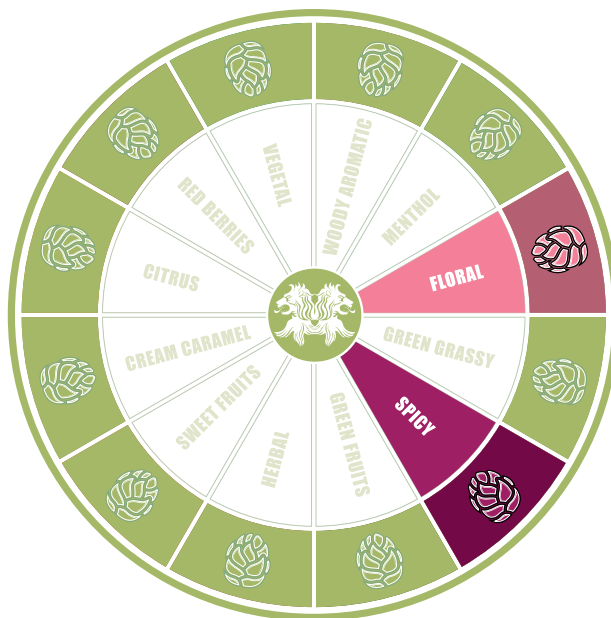


Liberty

U.S. AROMA HOP

Liberty is a triploid variety bred as a cross between a female Hallertau Mittlefrüh and a downy mildew resistant German male hop. The variety was developed in 1983 from the USDA program at Oregon State University and released in the U.S. in 1991. Of the four triploid Hallertau Mittlefrüh varieties released, Liberty most closely resembles the Hallertau Mittlefrüh.

Pedigree	Triploid from Hallertau Mittlefrüh and German aroma male hop
Aroma/Flavor	Mild, slightly Spicy, Floral
Alpha Acids*	3.0 - 5.0%
Beta Acids	3.0 - 4.0%
Cohumulone	24 - 30% of alpha acids
Total Oil	0.6 - 1.2 ml/100g
Myrcene	20 - 40% of total oil
Humulene	35 - 40% of total oil
Caryophyllene	9 - 12% of total oil
Farnesene	<1% of total oil
Storage Stability	Poor to fair



Varieties subject to availability. Contact your Territory Manager to place your order.

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