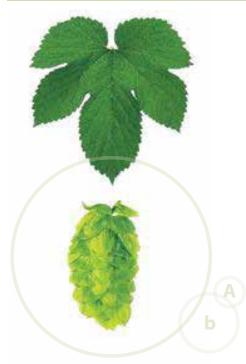


HOP VARIETY DATA SHEET

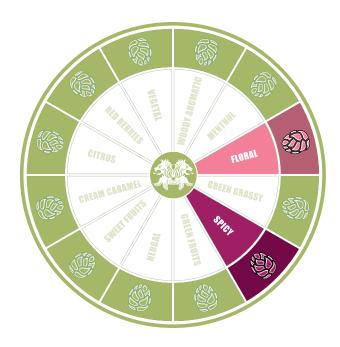


Cluster

U.S. BITTER HOP

Cluster is one of the oldest varieties grown in the U.S. The rootstock origin is uncertain. Until the late 1970's, Cluster was one of only a few varieties grown in the U.S. and dominated the growing acreage. Alpha acids content is medium, aroma is strong and storage stability of the alpha acids is among the best in the world. The variety grows with good vigor and cone production.

Pedigree	Unknown but possibly a cross between English variety and U.S. male hop
Aroma/Flavor	Floral and Spicy
Alpha Acids*	5 8.5%
Beta Acids	4.5 - 5.5%
Cohumulone	37 - 43% of alpha acids
Total Oil	0.4 - 0.8 ml/100g
Myrcene	45 - 55% of total oil
Humulene	15 - 18% of total oil
Caryophyllene	6 - 7% of total oil
Farnesene	<1% of total oil
Storage Stability	Excellent



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

Jim Wolf • Central West jim.wolf@wvhops.com 503.800.1448

Main Office • Southwest office@wvhops.com 503.633.4677

Paul Allard • East Coast paul.allard@wvhops.com 207.807.7074

Brandon Nguyen • Northwest brandon.nguyen@wvhops.com 541.908.3502

Eric Bougie • Canada eric.bougie@wvhops.com 514.621.9309

Tilly Dorsey • Central East tilly.dorsey@wvhops.com 971.281.1121