



# Sandy Ridge Farms Hop Informational Sheet

Variety	Description	Alpha Acids	Beta Acids	Yield (lbs/Acre)
<b>AlphAroma</b>	A uniquely bred New Zealand hop, this varietal originated in the 1970s, but was not commercially released until about 1983. The unique oil balance and medium alpha acid content makes AlphAroma a dual purpose hop. Put these characteristics to good use by adding this hop to Pale Ales and Lagers to add a firm bitterness as well as a citrusy, fruity aroma.	5.8-10.9%	2.4-4.8%	1,100 - 3,400
<b>Cascade</b>	Cascade is an aroma hop that was developed by the U.S.D.A. breeding program in Oregon and released in 1972. It has a medium strength aroma that provides a unique floral/spicy character with well balanced bittering potential. It is the most popular hop with the U.S. craft brewing industry.	4.5 - 7%	4.8 - 7.0%	1,600 - 2,000
<b>Cashmere</b>	Cashmere was released by Washington State Univ in 2013. A daughter of Cascade, it includes Northern Brewer germplasm through the male parent. The alpha acid content of Cashmere is higher than Cascade. Cashmere has a mild herbal aroma and smooth bitterness.	7.7-9.1%	6.4-7.1%	1,800 - 2,000
<b>Centennial</b>	Centennial is an aroma variety that was released in 1990. It was derived from three-quarters Brewer's Gold with minor contributions from Fuggle, East Kent Golding and others. It is among the most popular varieties for U.S. craft brewers and is sometimes referred to as a super Cascade.	9.5 - 11%	3.5 - 4.5%	1,500 - 1,750
<b>Chinook</b>	Chinook was developed by the U.S.D.A. breeding program in Washington State and released in 1985 as a high alpha variety. It has a highly acceptable beer aroma profile with smooth bitterness and full flavor.	12 - 14%	3.0 - 4.0%	1,700 - 2,100
<b>Cluster</b>	Cluster is the oldest hop variety grown in the U.S. It is an excellent general purpose hop with well-balanced bittering potential and aroma properties. The storage stability of its alpha acids is among the best in the world.	5.5-8.5%	4.5-5.5%	1,700 - 2,100
<b>Columbia</b>	Columbia enjoyed a small production in the 1980's, but was later discontinued in favor of Willamette. However, when craft brewers discovered the amazing pungent kick of hoppiness combined with its lemon citrus twist, they clamored to have it brought back.	6.8-11.5%	2.9-5.6%	1,200 - 1,500

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<b>Crystal</b>	Crystal is a triploid variety that was bred by USDA from Hallertau mf, Cascade, Northern Brewer, and Early Green. It is perceived as the most pungent of the triploid Hallertau family, and is increasingly popular among US craft brewers. It is a versatile variety that is used in Pilsners and Lagers, as well as in ESB's and American and Belgian-style Ales.	3.5 - 4.5%	4.5 - 6.5%	1,200 - 2,000
<b>Fuggle H</b>	This classic English aroma variety has long been grown in both Oregon and Washington. It has a typical English aroma and contributes a balanced bitterness. Fuggle is very suit-able for English and American-style Ales.	4-5.5%	1.5 - 2.0%	1,070 - 1,600
<b>Galena</b>	Galena is a high alpha variety that was developed in the Idaho state breeding program in 1978. It has balanced bit -tering properties combined with an agreeable aroma profile. Galena's storage stability is excellent. It has often used in both English and American-style Ales.	11.5-13.5%	7.2 - 8.7%	1,700 - 2,100
<b>Glacier</b>	Glacier is a dual-purpose hop with well balanced bittering properties and a pleasant aroma profile. It was released in 2000 from the Washington State Univ breeding pro-gram. It is commonly used in Pale Ale, ESB, Bitter, English-Style Pale Ale, Porter, and Stout.	5%	8.20%	2,400 - 2,600
<b>Hallertau mf</b>	Hallertau mf (mittelfrueh) is an aroma-type cultivar which originated in Germany and is a Noble hop: mellow compared to other varieties with a distinct flavor and softness. These varieties exhibit a spicy, herbal or floral aroma and flavor, and distribute a flash of citrus-like zest.	3.5 - 5.5%	3 - 4%	1,150 - 1,600
<b>Liberty</b>	Liberty is a triploid Hallertau variety that was bred by U.S.D.A. Of the four triploid Hallertau mf varieties released by U.S.D.A., Liberty most closely resembles the Hallertau mf cultivar. It is typically used in Lager, Pilsner, Bock, US Wheat, and Kölsch beers.	3 - 5%	3 - 4%	1,000 - 1,700
<b>Mt. Hood</b>	Named after the famous Oregon volcano, Mt. Hood is an aroma variety that was bred from the German Hallertauer variety and released in 1989 from the U.S.D.A. breeding program in Oregon. It has clear similarities to German Hal -lertauer and Hersbrucker, and is typically used in Lagers, Pilsners, Bocks, Wheat, Alt, and Helles beers.	4-7%	5 - 8%	1,450 - 1,750
<b>Magnum</b>	Magnum is a high alpha variety that was developed at the Hop Research Center in Huell, Germany. It is widely grown in the Hallertau region of Germany, and is also grown in the U.S. Magnum is a good bittering hop for Ales and Lagers.	12 - 14%	4.5 - 6%	1,340 - 1,700

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<b>Newport</b>	A high-alpha hop developed by the U.S.D.A. breeding pro-gram at Oregon State University using Hallertau Magnum as its mother. Newport has excellent yields and is resistant to both powdery and downy mildews.	13.5 - 17%	7.2 - 9.1%	1,990 - 2,550
<b>Nugget</b>	Nugget is a high alpha variety released in 1983 from the U.S.D.A. breeding program in Oregon. It is characterized by a mild herbal aroma, a low proportion of cohumulone, and good storage stability. It is used by brewers both for bittering and for its aroma profile. Nugget is one of the most widely grown varieties in Oregon and also has significant acreage in Washington State.	11.5-14%	4.2 - 5.8%	1,800 - 2,200
<b>Northern Brewer</b>	Bred in England, Northern Brewer is a dual purpose hop with moderate alpha and a good aroma profile. A strong fragrant hop with a rich rough-hewn flavor and aroma, this variety has a unique mint-like evergreen flavor.	9 - 10%	3 - 5%	1,600 - 1,800
<b>Perle</b>	Perle was bred from Northern Brewer at the Hop Research Center in Huell, Germany. It is well established in Germany and is also grown in both Oregon and Washington. Perle is a dual purpose variety with moderate alpha levels and a nice aroma profile. It is popular with growers due to its high yields and resistance to downy mildew and wilt.	7-9.5%	4 - 5%	1,160 - 1,600
<b>Saaz</b>	This traditional variety from the Czech Republic is grown on a limited basis in the U.S. It has a classic noble aroma that is famously used in Pilsners.	3 - 4.5%	3 - 4.5%	600 - 1,000
<b>Sorachi Ace</b>	This Japanese variety has a bold Lemon aroma and taste with maybe a dill, cilantro, and coconut notes to it too and a slight background oak flavor. Typically used for bittering, but with that focused lemon note it would probably do well when used later or after the boil. Beer Styles: Probably any beer that would work with a lemon taste, a Saison or an IPA.	13 - 16%	8.8 - 9.9%	1,600 - 1,800
<b>Tahoma</b>	Tahoma was released by Washington State University in 2013. Tahoma, the daughter of Glacier, retains the very low cohumulone characteristic of Glacier with somewhat higher alpha acid content. Tahoma has a pleasant aroma with subtle lemon citrus notes.	7.2-8.2%	8.5-9.5%	1,800 - 2,000

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<b>Tettnanger</b>	Tettnanger is a traditional German landrace variety known for its noble aroma that is pleasant and slightly spicy. It remains well established in the Tettnanger growing region of Germany, and is also grown in Oregon and Washington. American-grown Tettnanger is reported to have slightly higher myrcene levels than its German counterpart.	4-5%	3 - 4%	900 - 1,340
<b>Triple Pearl</b>	Triple Pearl is a triploid daughter of Perle that was released by USDA-ARS in late 2013. Pleasant, mellow aroma with notes of orange-citrus, orange rind/zest, melon, resin, spicy and slight pepper.	10.3 - 11.2%	3.3 - 4.2%	1,600 - 1,650
<b>Ultra</b>	Ultra was bred by U.S.D.A. from a tetraploid Hallertau mf cultivar and a Saazer-type male diploid genotype. It is a half-sister to Mt. Hood, Liberty, and Crystal. Ultra has a mild and pleasant Saaz-like aroma. It has very low alpha acids compared to most U.S. aroma varieties.	2 - 3.5%	3 - 4.5%	1,600 - 1,800
<b>Vanguard</b>	Vanguard was the last of the Hallertau varieties to be released from the U.S.D.A. breeding program. It has a reputation of having a very close chemistry and aroma to Hallertau mf. Vanguard is typically used in Lager, Pilsner, Bock, Kölsch, Wheat, Munich, Helles, and Belgian-style Ales.	5.5 - 6%	6 - 7%	1,350 - 1475
<b>Willamette</b>	Willamette was released in 1976 from the U.S.D.A. breeding program. It is a daughter of the classic English variety, Fuggle, and is characterized by a low alpha content and mild aroma. Willamette is the most widely grown U.S. aroma hop. It imparts a mild, slightly spicy, and pleasant aroma in beer.	4 - 6%	3.5 - 4.5%	1,300 - 1,700
<b>Yakima Gold</b>	Yakima Gold was released by Washington State University in 2013. Yakima Gold, a cross between Early Cluster and a native Slovenian male, is an excellent general purpose hop with smooth bitterness and a pleasant aroma.	8.8 -10.5%	4.3-5.0%	1,800 - 2,000
<b>Zeus</b>	Zeus is a great dual purpose hop making it ideal for laying the bitter foundation for beers such as Pale Ales, India Pale Ales, Stouts, and anything Imperial and is commonly used for late-boil or dry hopping for its herbal, earthy character. The aroma is pleasing and citrus notes may be found in fresh batches. Zeus is so similar to Columbus/Tomahawk that it is often lumped into the name as CTZ.	14 - 16%	4 - 5%	2,500 - 2,900

Data from USA Hops, Hop Growers of America, variety manual.

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