



The Australian grown hop variety *Willamette* is a seedless aroma variety grown by Hop Products Australia since 1988. Willamette has Fuggle type aroma qualities. It is known for its aromatic properties and moderate bittering. It has been used as a replacement for Fuggle hops. It is characterised by moderate alpha acids (moderately bittering) and aroma qualities.

Origin

Willamette was developed by the USDA breeding programme in Oregon and released in 1976. It is the daughter of Fuggle and is characterized by a low alpha acids, mild aroma similar to Fuggle.

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<u>Analytical Data</u>	<u>Australian Grown</u>	<u>US Grown</u>
Yield (Kg/Ha)	1200 – 1600	1456 –1792
Alpha acids (%)	6.2—6.8	4.0—6.0
Beta acids (%)	3.5—5.2	3.5—4.5
Alpha/Beta Ratio	1.5—1.7	1.3—1.4
Cohumulone (%)	30—35	30—35
Total Oils (ml/100g)	1.0—1.3	1.0—1.5
Myrcene (% of whole oil)	13—30	30—40
Beta Caryophyllene (% of whole oil)	14—15	6.5—8.2
Farnesene (% of whole oil)	7	5—6
Humulene(% of whole oil)	24—42	20—27
β & α Selinene (% of whole oil)	1—3	
Humulene/Caryophyllene ratio	2.7—2.8	

*Hop Acids by HPLC (ICE)
Steam distilled essential oil analyzed by GC-MS*

The analytical values are typical for each variety at harvest time but values can vary among crop years, growing areas, growers, and with aging after harvest.