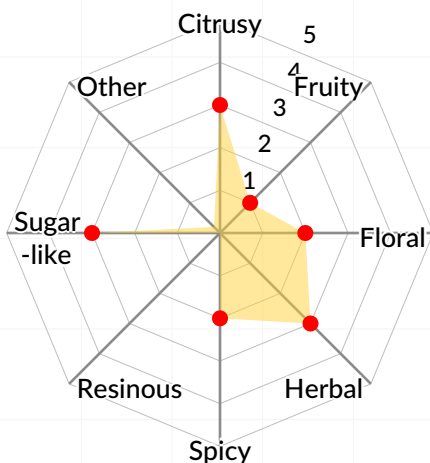


AROMA EVALUATION



AROMA SPECIFICATION

orange, fruity, vanilla, floral

GENETIC ORIGIN

Zeus x (98004 x USDA 19058m).

AGRONOMIC ASPECTS

GROWING

Yield (kg/ha)	3,000 - 3,500
Yield (lbs/acre)	2,700 - 3,150
Maturity	Very Late
Main Growing Country	USA
Acreage (ha)	255

RESISTANCE AGAINST DISEASES

Downy mildew	Tolerant
Powdery mildew	Susceptible

CHEMICAL INGREDIENTS

BITTER COMPONENTS

Alpha-Acid %	14.0 - 17.0
Beta-Acid %	3.0 - 5.0
Co-Humulone % rel.	29 - 34
Hard Resins : Alpha-Acid	0.14 - 0.24

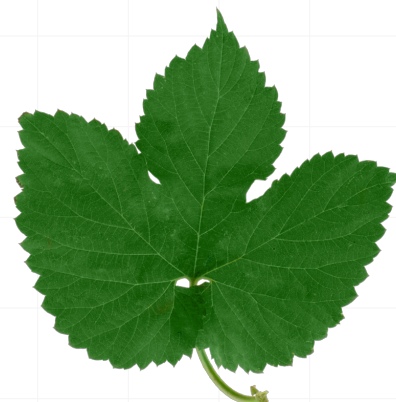
POLYPHENOLS

Xanthohumol (EBC 7.7)	0.8 - 1.0
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AROMA COMPONENTS

Total Oils (ml/100g)	1.6 - 2.4
Beta-Caryophyllene: Humulene	0.58
Farnesene % of total Oil	0.00 - 1.00
Linalool % of total Oil	0.2 - 0.3
Linalool: Alpha-Acid	0.01 - 0.02

VISUAL EVALUATION



HOP ALTERNATIVES

BREWHOUSE

Zeus, US Magnum, Nugget

DRY HOPPING

Chinook, Centennial

Bravo is tried and true in the kettle, offering a polished and pleasant bitterness profile. Candied orange and sweet fruit notes emerge when used as a late hop or dry hop addition. Bravo is "the bittering hop of choice" among many brewers.

Hop Highlights:

14–17% Alpha

3–5% Beta

High Geraniol

Pleasant Bitterness

HOPS HOTLINE

800.339.8710