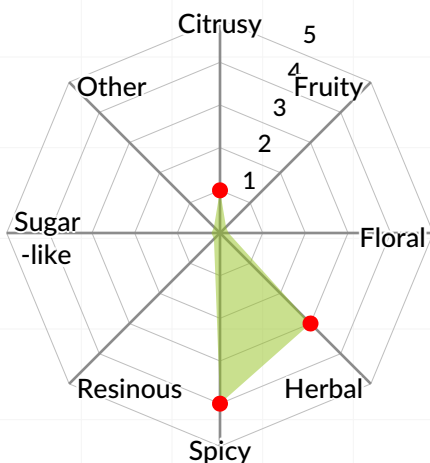


## AROMA EVALUATION



## VISUAL EVALUATION



## AROMA SPECIFICATION

black pepper, onion, light citrus

## GENETIC ORIGIN

Tomahawk is a bittering hop of recent origin.

## AGRONOMIC ASPECTS

### GROWING

|                      |               |
|----------------------|---------------|
| Yield (kg/ha)        | 2,900 - 3,000 |
| Yield (lbs/acre)     | 2,600 - 2,700 |
| Maturity             | Late          |
| Main Growing Country | USA           |
| Acreage (ha)         | 572           |

### RESISTANCE AGAINST DISEASES

|                |             |
|----------------|-------------|
| Powdery mildew | Susceptible |
| Aphid          | Susceptible |

## CHEMICAL INGREDIENTS

### BITTER COMPONENTS

|                          |             |
|--------------------------|-------------|
| Alpha-Acid %             | 15.0 - 17.0 |
| Beta-Acid %              | 4.5 - 5.0   |
| Co-Humulone % rel.       | 30 - 35     |
| Hard Resins : Alpha-Acid | 0.21 - 0.46 |

### POLYPHENOLS

|                       |           |
|-----------------------|-----------|
| Xanthohumol (EBC 7.7) | 0.7 - 0.8 |
|-----------------------|-----------|

### AROMA COMPONENTS

|                              |             |
|------------------------------|-------------|
| Total Oils (ml/100g)         | 2.5 - 3.5   |
| Beta-Caryophyllene: Humulene | 0.60 - 0.61 |
| Linalool % of total Oil      | 0.4 - 0.6   |

## HOP ALTERNATIVES

### BREWHOUSE

Galena, Chinook, Nugget

### DRY HOPPING

Galena, Chinook, Nugget

**HOPS HOTLINE**  
**800.339.8710**