



- ❖ **Hop Variety:** ***Vanguard***
- ❖ **Origin:** A cross between a selected, Hallertauer daughter and a USDA Selected, German aroma male; a triploid hop, similar to Hallertauer Mittelfrüh.
- ❖ **Maturity:** Early
- ❖ **Yield:** 1500 - 1650 kgs/ha (1300-1450 lbs/acre)
- ❖ **Disease Reaction:** Moderate to good resistance to downy mildew.
- ❖ **Cone Structure:** Small to medium sized, fairly light
- ❖ **Quality:**
- **Aroma** Excellent noble aroma
 - **Storage Stability** 75 – 80 %
- ❖ **HPLC Data:**
- **Alpha-Acids** 4.0 – 6.0 % w/w
 - **Cohumulone** 14 - 16 % of alpha acids
 - **Beta-Acids** 5.0 – 7.5 % w/w
 - **Xanthohumol** n/a
- ❖ **Hop Oils:**
- **Total Oil** 0.8 – 1.2 % v/w
of which typically:
 - **Myrcene** 20.0 – 25.0 %
 - **Humulene** 40.0 – 50.0 %
 - **Caryophyllene** 10.0 – 15.0 %
 - **Farnesene** < 1.0 %
 - **Linalool** N/A
- ❖ **Brewing Character:** Provides excellent aromatic notes, along with a very low cohumulone content.

VDS 57/02 issued 31-January-03