



Hopunion CBS, LLC

GR NORTHERN BREWER

Pedigree	One of the original medium to high alpha hops, bred in England and later grown also in Belgium, Spain, Germany and the US.
Maturity	Early – Mid season
Yield	1800 – 2400 kg./ha. or 1600 – 2150 lb./ac.
Growth Habit	Quite vigorous and strong growing
Disease/Pest Susceptibility	Susceptible to downy and powdery mildew but tolerant to German hop wilt. No strong virus reactions.
Pickability/Drying/Baling	Good
Cone-Structure	Medium-sized cone, only fairly compact. Variety prone to produce leaves in cones – “cock hops”
Lupulin	Medium yellow, fairly abundant
Aroma	Medium-strong with some wild American tones
Alpha Acids	7 – 10% w/w
Beta Acids	3.5 – 5% w/w
Co-Humulone	28 – 33% of alpha acids
Storageability	70 – 80% alpha acids remaining after 6 months storage at 20° C
Total Oil	1.6 – 2.1 mls/100 grams
Myrcene	30 – 35% of whole oil
Humulene	25 – 30% of whole oil
Caryophyllene	8 – 10% of whole oil
Farnesene	<1% of whole oil
General Trade Perception	A true dual-purpose hop containing moderate amounts of alpha acids combined with an acceptable aroma profile.
Possible Substitutions	Chinook, US Northern Brewer, German Brewer’s Gold
Typical Beer Styles	ESB, Bitter, English Pale Ale, Porter, Lager, Lambic, Munich Helles
Additional Information	Although declining in area in England, this variety is one of the main high-alpha hops in Germany.
Personal Notes:	