

# Millennium®

U.S.

## High Alpha Hop



Millennium® is a high alpha hop brand developed through the John I. Haas, Inc., breeding program and released in 2000, the turn of the millennium. With Nugget as the mother, this triploid brand exhibits the same powdery mildew resistance as Nugget and its brewing profile is comparable to that of Nugget and Columbus-type varieties.

Pedigree	Triploid high-alpha; Nugget mother
Aroma	Mild, somewhat pungent
Alpha Acids*	14.5 - 16.5 %
Beta Acids	4.3 - 5.3 %
Cohumulone	28 - 32 % of alpha acids
Total Oil	1.8 - 2.2 ml/100g
Myrcene	30 - 40 % of total oil
Humulene	23 - 27 % of total oil
Caryophyllene	9 - 12 % of total oil
Farnesene	< 1 % of total oil
Storage Stability	Excellent

\* Alpha acids are determined by conductometric titration (EBC 7.4) in Europe; by spectrophotometric (ASBC Hops-6) in USA