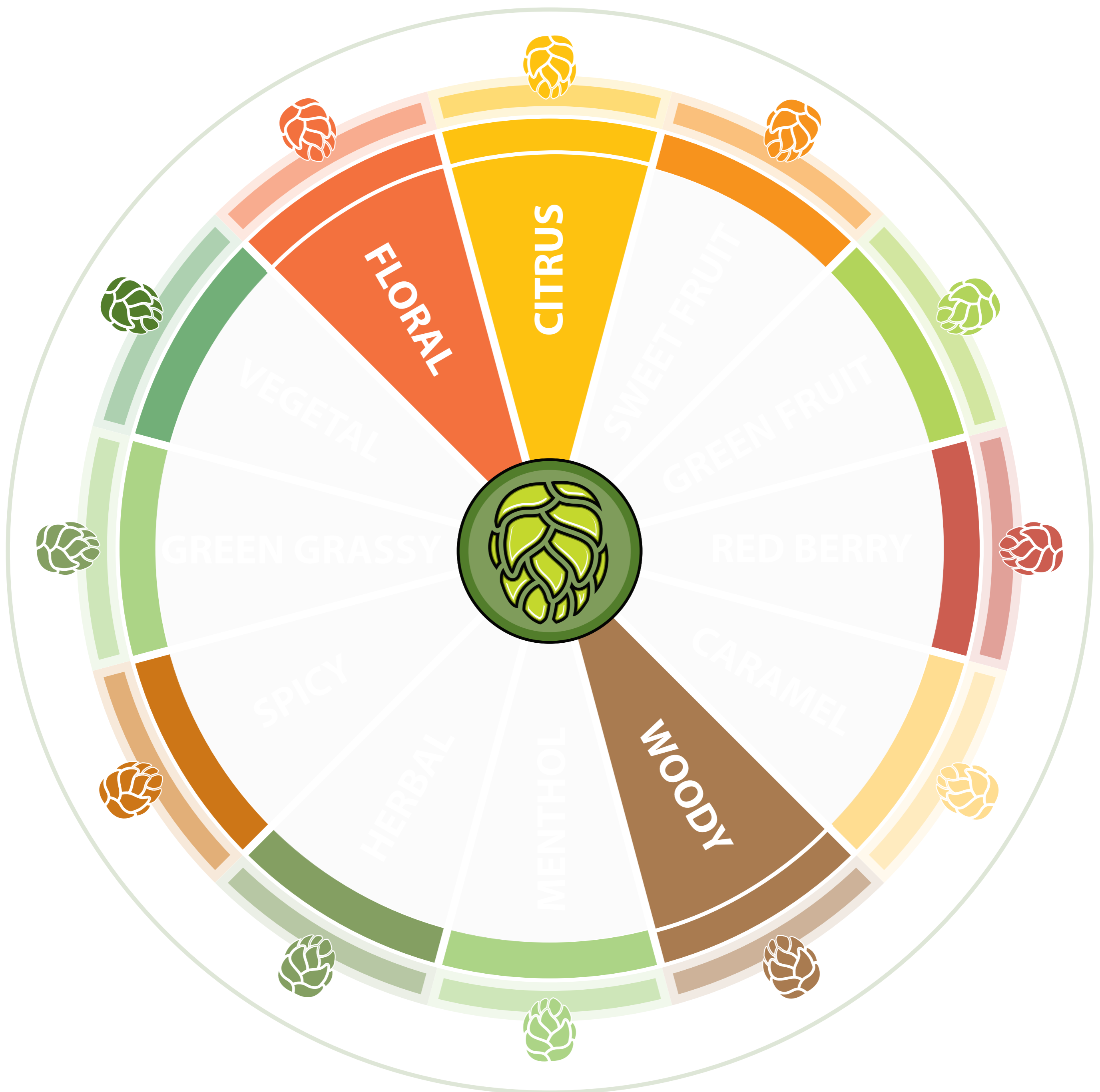


# LIBERTY

UNITED STATES



LIBERTY IS A TRIPLOID VARIETY BRED FROM A CROSS BETWEEN A FEMALE HALLERTAUER MITTELFRÜH AND A DOWNY MILDEW RESISTANT GERMAN MALE HOP. THE CULTIVAR WAS BRED IN 1983 AT THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) PROGRAM AT OREGON STATE UNIVERSITY AND RELEASED IN THE U.S. IN 1991. OF THE FOUR U.S. TRIPLOID HALLERTAU VARIETIES RELEASED DURING THAT TIME, LIBERTY MOST CLOSELY RESEMBLES HALLERTAUER MITTELFRÜH.

## TECHNICAL DATA

ALPHA (%): 3-5

BETA (%): 3-4

COHUMULONE (% OF ALPHA ACIDS): 24-30

TOTAL OIL (ML/100G): 0.6-1.2

MYRCENE (% OF TOTAL OIL): 20-40

HUMULENE (% OF TOTAL OIL): 35-40

CARYOPHYLLENE (% OF TOTAL OIL): 9-12

FARNESENE (% OF TOTAL OIL): <1

LINALOOL (% OF TOTAL OIL): --

TOTAL POLYPHENOLS (%): --



**WILLAMETTE VALLEY HOPS**