## **Brewing With Fresh Hops**

As August closes and September begins, craft brewers throughout the country eagerly wait to hear that harvest, and therefore green hops, has begun. Green hops are an annual celebration, endowing each harvest with a distinct flavor and producing fresh hop beers layered with wonderful bittering characteristics and vibrant aromatic qualities. For brewers, green hops are a reminder of beer's agricultural roots. They are volatile and exciting in nature, producting a host of brewing challenges. In a matter of 48 hours or less, green hops are harvested on the farm, hand packaged at Hopunion, and shipped to customers for immediate brewing. The entire process is furious and full of logistical complications but brewers agree, the taste of each resulting fresh hop beer is worth every hardship.

When brewing with green hops, several considerations must be taken into account in order to achieve the proper results:

**Timing & Availability** - Due to the timing of harvest and peak maturity date for multiple hop varieties, scheduling a fresh hop brew can be very challenging. Brewers will often only receive 24-72 hours notice before each green hop variety arrives. In any given year, only a select 5-6 varieties are available through the green hops program and each of these varieties is harvested on a different day.

**Quantity** - Due to water retention, green hop recipes typically require 4 to 7 times more hops than traditional whole hops or hop pellets. This ratio can vary based on a brewer's tastes however it is always greater than 1:1.

**Shipping** - Ideally, green hops should arrive for immediate brewing within 48 hours of harvest. This requires overnight shipping (or customer pickups) and results in increased shipping costs.

**Evaporation** - From the moment green hops are harvested, water loss begins to occur. As a result, green hops shipments are susceptible to small fluctuations in weight.

