

# HOP VARIETY INSIGHTS



## CIP 014 – THE BREEDER’S PERSPECTIVE

Clayton Hops is proud to partner with the New Zealand Institute for Bioeconomy Science (formerly Plant & Food Research) (**NZIBS**) – which is New Zealand’s leading hop plant breeder – to bring new and exciting hop varieties to the market. We asked our friends at NZIBS to provide us with their thoughts on CIP 014.

### ANCESTRY

CIP 014 (L14.022-039) is the product of the longstanding NZIBS hop plant breeding program.

It is the result of a cross made in 2014 between a New Zealand bred tetraploid mother and a New Zealand bred diploid male.

The ancestry includes Nugget, Smoothcone, Southern Cross™ and Pacific Sunrise™.

### SELECTION/BREEDER NOTES

CIP 014 was planted as a seedling in 2014. The first harvest was in March 2016.

CIP014 was selected based on yield, chemistry and sensory characteristics.

It was then trialled for five years in advanced selection trials. This was when the first trial brewing was undertaken, which identified the hop as having intense passionfruit and tropical notes when used as the dry hop in a light pale ale.

These sensory characteristics were found to be consistent over the years and this hop quickly gained a reputation within the breeding team as a favourite when doing sensory.

### GEOGRAPHY

CIP 014 is currently grown in the Tasman region of New Zealand on the Clayton hop farms.

### BREWING VALUES

CIP 014 was identified as having strong passionfruit flavours and aromas early in selection through trial brewing.

The  $\alpha$ -acid is ~13-14%, with relatively low Cohumulone of around ~25-27% of total  $\alpha$ . It is a true dual-purpose hop.

Total oil is ~1.3mL/100g.

# FLAVOUR AND AROMA PROFILE



The flavour and aroma profile is tropical with a strong passionfruit note coming through. There is also significant citrus and stone fruit notes underlying the profile.

Further flavour and aroma potential will likely be discovered, developed and exploited by commercial brewers when used with different combinations of yeast and malt.

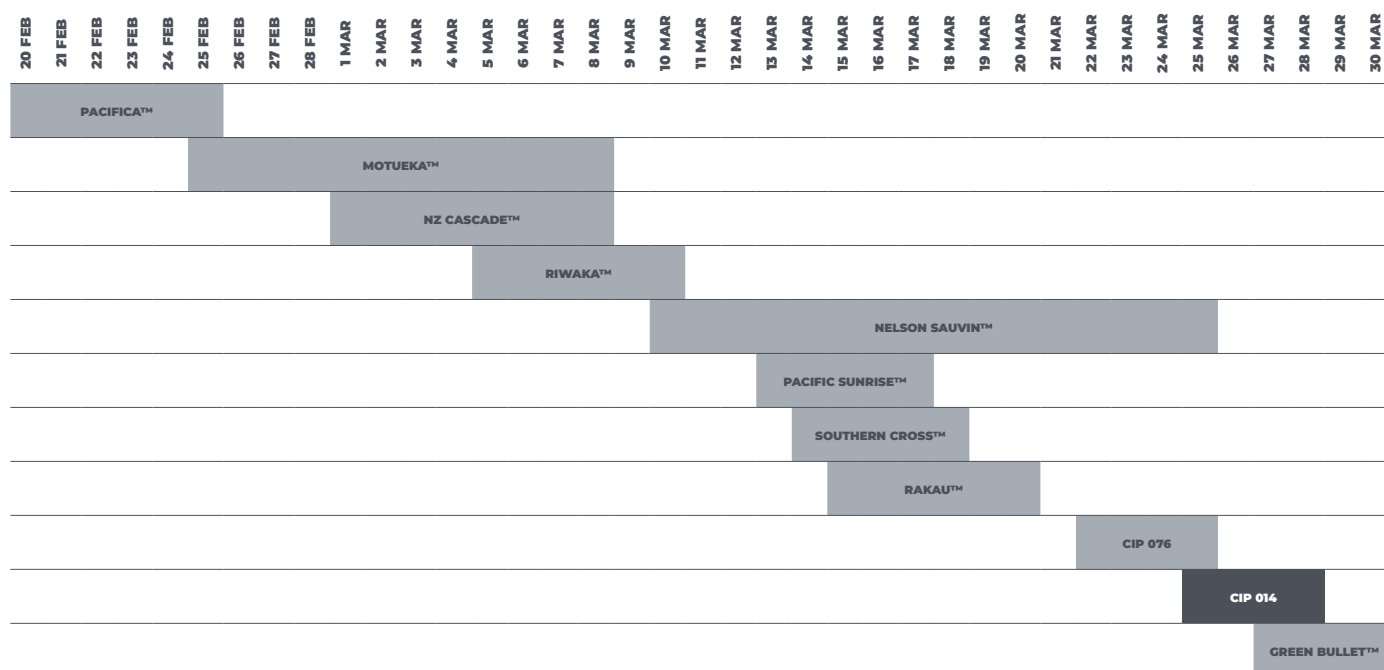
## BEER STYLES

With intense tropical flavours and aromas when used in a dry hopped beer this hop is ideal to use in hop-forward beer styles such as pale ales, IPAs and the multitude of variants of these styles.

With moderately high alpha (13-14%) and a relatively low Cohumulone (23-27%) this hop has a smooth bitterness and could be used in any beer style seeking this outcome.

## HARVEST WINDOW

The following chart depicts the harvest windows of selected New Zealand hop varieties, including CIP 014. The chart is a guideline in the sense that harvest windows can change somewhat from year to year. Harvest windows for newer hops such as CIP 014 are subject to further refinement.



## PEST AND DISEASE RESISTANCE

NZIBS' predecessor focused on breeding pest and disease resistant hop varieties many decades ago with great success.

New Zealand has only one pest as far as hops are concerned, being an insect that can reduce yields. New Zealand hop farmers endeavour to control this insect through biological controls and hop garden management practices.

New Zealand is very fortunate in that it does not have diseases to contend with in the hop garden. For instance, Downy mildew and Powdery mildew are not an issue in New Zealand.

Overall, the New Zealand hop industry is in the highly enviable position of having a very low pest and disease environment compared to other countries. This enables New Zealand hop farmers to apply far less sprays and chemicals in their hop gardens than in other countries – something that gives the New Zealand hop industry a major and ever-increasing competitive advantage.