Technical Note

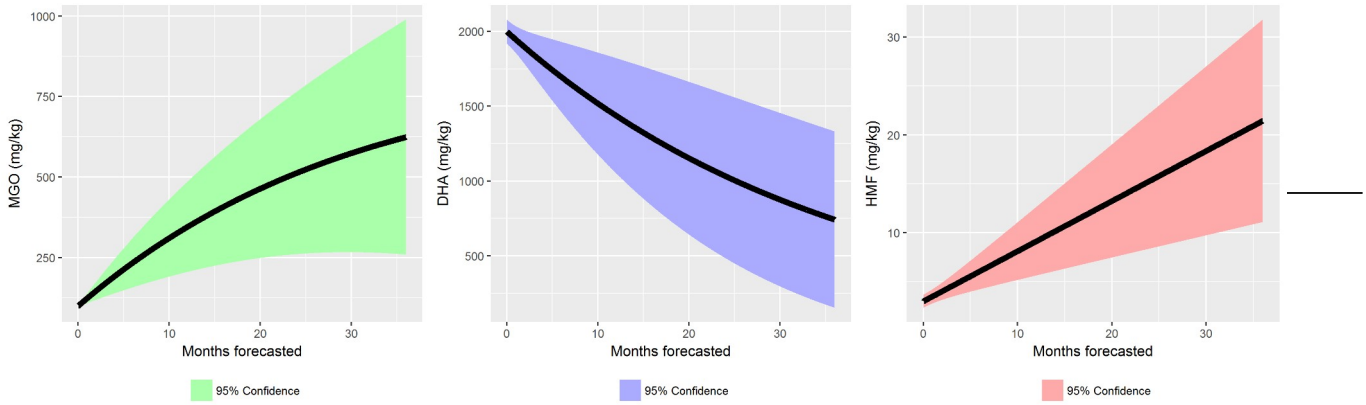
# Mānuka Honey Forecast Model

Hill Laboratories' Mānuka honey forecast model is used to predict the concentrations of Methylglyoxal (MGO), Dihydroxyacetone (DHA), Hydroxymethylfurfural (HMF) and Non-peroxide activity (NPA) over time at a range of temperatures. It is based on a kinetic model for each chemical using experimentally determined conversion rates in Mānuka honey. Hill Laboratories have determined these rates by holding numerous Mānuka honey samples in controlled conditions, at three temperatures for over a year.

What we discovered is that not all Mānuka honeys behave equally, indicating that there are other important variables within the honeys that influence how they mature. Unfortunately, the reason for these differences are not yet known, so our current model must assume that all honeys behave equally, and that they all have the same underlying rates. It is necessary to make this assumption, even though it is incorrect, and so this is the main source of the error in the model. Through experimentation we have estimated this error, and this is included explicitly in our reports.

It is important to note that any model that is 'global' and assumes all honeys behave equivalently will also contain a similar error.

**Honey Forecast at 20°C**



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