

## Not all Leptospermum Are Equal (The what and where of Australian Leptospermum)

Australian Leptospermum (Manuka) honey research is continuing in a collaboration between University of Technology Sydney, (UTS), University of Sydney (USyd) and University of the Sunshine Coast (USC), supported by Rural Industries Research & Development Corporation (RIRDC), Capilano Honey Limited and Comvita Limited.

USC PhD student Simon Williams has spent much of the last year with Australian beekeepers identifying Leptospermum spp. and collecting nectar samples from Qld, NSW, Tas, Vic and SA. Thirty-five of

Australia's Eighty-Three species have now been tested. We're beginning to build a picture of the Leptospermum family and it's looking good. So far it appears every state has a species that is active and could produce a medical grade honey. Seasonal weather being the governing factor of when the plants will yield nectar.

A Leptospermum resource for beekeepers is being built from the information being gathered. This will assist those beekeepers that are looking to produce medically active honey. The aim is to help beekeepers identify what plants are in their area and how active they are.

Species	Average DHA (ppm)	States Naturally Occurs in
Leptospermum continentale	3800	SA, VIC, NSW
Leptospermum coriaceum	0	SA, VIC, NSW
Leptospermum grandiflorum	3000	VIC, NSW
Leptospermum juniperinum	5200	NSW, QLD
Leptospermum laevigatum	0	WA, SA, VIC, TAS, NSW, QLD
Leptospermum lanigerum	3500	SA, VIC, TAS, NSW
Leptospermum liversidgei	9500	NSW, QLD
Leptospermum myrsinoides	0	SA, VIC, NSW
Leptospermum niten	9000	WA
Leptospermum oligandrum	400	WA
Leptospermum petersonii	6800	NSW, QLD
Leptospermum polygalifolium	8200	NSW, QLD
Leptospermum scoparium	2200	SA, VIC, TAS
Leptospermum semibaccatum	0	NSW, QLD
Leptospermum speciosum	16000	NSW, QLD
Leptospermum trinervium	0	NSW, QLD
Leptospermum whitei	16700	NSW, QLD

**Table 1**, list of Leptospermum spp. and DHA levels in their nectar.

Table 1 provides a list of the currently tested leptospermum spp. Not all species are included and this is due a lack of sufficient sample numbers. Only species with 10 tree or more samples are included. For a point of reference L. scoparium (Manuka) in New Zealand has an average DHA of around 3000 ppm with some of the new cultivars for plantations reaching 12000 ppm DHA. Some

of the Australia spp. far exceed this (L. whitei) while others such as L. laevigatum and L. trinervium have no DHA at all.

The DHA in the nectar is converted to the active MGO/NPA/UMF® as the honey matures over 12-18 months depending on the temperature (holding the honey at temperatures above 22°C will not accelerate conversion and will in fact reduce the final MGO)

Without a nectar flow there is no DHA. Our work is also looking at this critical aspect to quantify nectar sugars to predict honey volume.

### How do you identify a Leptospermum?

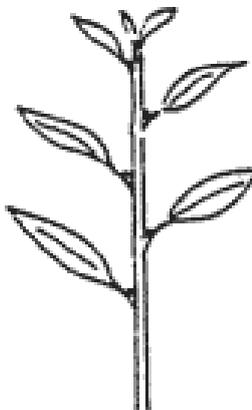
Though all Leptospermum are Tea Tree not all Tea Tree are Leptospermum.

### Flowers



Leptospermum flowers have 5 petals with stamens shorter or similar size to the petals with an open dish shape. Though white is the most common it is also possible for pink, red and purple varieties to exist.

### Leaves



Alternate

The leaves generally alternate

### Fruit

The fruit can be woody with 4 -6 divisions



Or fleshy with multiple divisions.



For aid in identification of Leptospermum trees. Send **Close Up** photos of the leaves, flowers, bark and fruit with the location to Simon.

The project is still ongoing with another 1 or 2 flowering season to be done. This year we hope to get to North Queensland, Western Australia and west of the Great Divide in NSW and Queensland. We're still collecting honey samples to allow a comparison to be made between the nectar and the honey of the different species. Providing a sample sheet is filled in, all honeys are tested free of charge and the DHA, MGO, HMF and Total activity and Non-peroxide activity provided back to the beekeeper.

Simon will be identifying leptospermum in the field again this flowering season and is seeking help from beekeepers in identifying areas and logistics.

See <https://ozhoneyproject.wordpress.com/> for more details about the project, how to submit samples and to sign up for updates.

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