

Decision support for Noongar hive migration

CRC for Honey Bee Products researchers helped the Noongar Land Enterprise Group, an Indigenous collective promoting commercially viable Noongar land-based businesses, to reliably produce ngooka, the Noongar word for honey.

Noongar Land Enterprise Group (NLE) properties stretch across the south-west of Western Australia, with each farm developed for a specialised agricultural use. Honey production has been identified as one of the group's top business enterprise aspirations. It links these farms together as honey bees need to be moved from one nectar flow to another.

In collaboration with NLE members, CRC researchers geographically mapped the flora on each NLE farm. This was linked to the CRC's Flora Database to define each flora's phenology. Each property was checked, and through triangulation of flora availability, flowering times and honey and pollen quality, hive migration scenarios were developed in consultation with an expert beekeeper.

A hive migration decision-support tool was developed to help the Noongar Land Enterprise Group maximise their property's melliferous flora resources for honey production.

The decision-support tool allows NLE members to identify the flora used for their bees and the optimum yearly flowering times on each property. Optimum flowering time depends on the biology of the plant and the climatic conditions of that year.



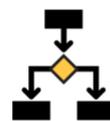
Examples of flora resources found on Noongar Land Enterprise properties



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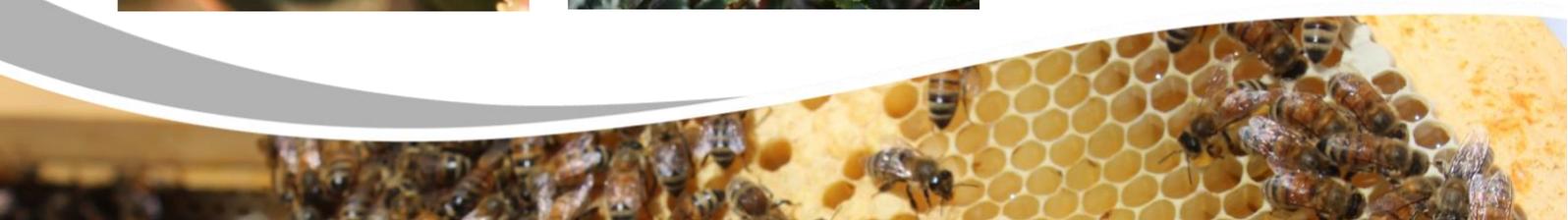
food resources



decision support



bee-friendly



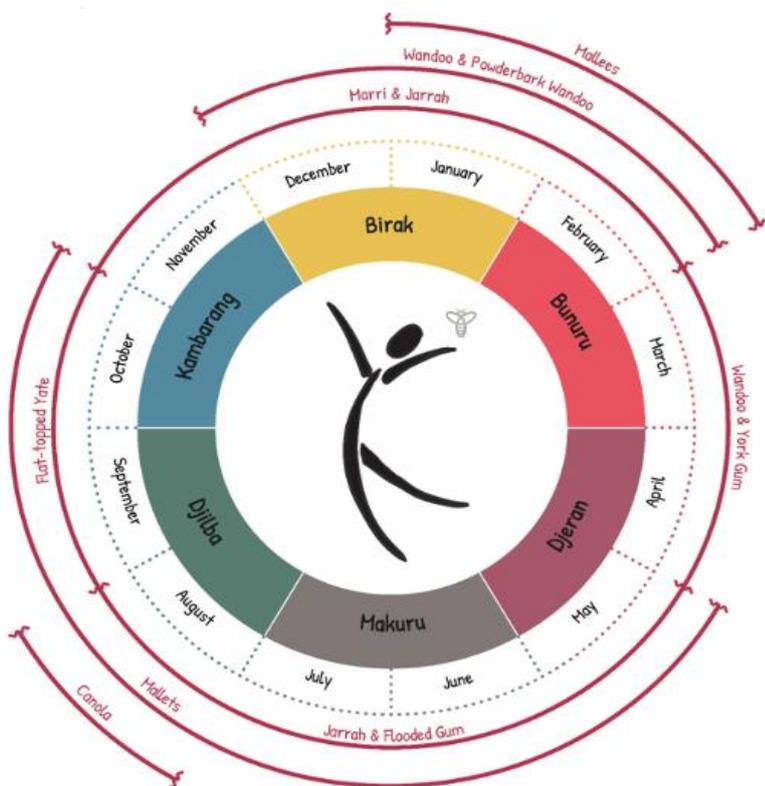


The decision-support tool was also used to identify gaps and high-risk periods in year-round flowering. It highlighted the need for additional native plantings on NLE properties to ensure year-round flowering.

Researchers found that the best approach to enhanced honey production was through the migration of hives across member properties throughout the year. This maximises production and provides environments that support bee health.

To build beekeeping capacity among NLE members, the CRC also helped to establish and deliver a CERT III beekeeping training program. NLE members motivated to become accredited beekeepers gained valuable training to engage in the group's commercial beekeeping enterprise. The CERT III training program was successful in engaging with, and training, the next generation of Indigenous beekeepers.

Through this research, training and the decision-support tool, the CRC has provided a plan to help the NLE achieve its goal of producing quality year-round honey commercially.



Example of a hive migration wheel of flora resource availability by Noongar bonar and months