

Logging Bee Hive Temperatures

Monitoring Bee Health with EasyLog USB Loggers



Joergen Nielsen from Silkeborg in Denmark began keeping bees in his garden in 2016, when he took up an old hobby from when he lived on a farm in the 80s. He had been contacted by a beekeeping friend, whose husband had developed an allergy reaction towards bee sting, and she had made the obvious choice of letting go of her bees (not her husband!) – and so they landed in Joergen’s backyard. He currently has three hives, which are used in his honey production venture, Alderslyst Honning.

Last year, Joergen had the unfortunate experience of a hive dying due to cold weather. To prevent this happening again, he wanted a way to monitor the temperature in the hive, so that he knew the bees were in good shape.



During the winter, monitoring the temperature would show whether the bees were alive or not. Furthermore, the monitoring can reveal when the queen starts to lay eggs in the Springtime, as the temperature will rise by two degrees.

Joergen used the Lascar EL-USB-TP-LCD for the temperature monitoring. This is a USB temperature data logger that has a thermistor probe on a 1m cable. The logger was placed outside the hive, inside a plastic tub to give weather protection, and the probe placed inside the hive. Joergen found the logger



The logger positioned outside the hive



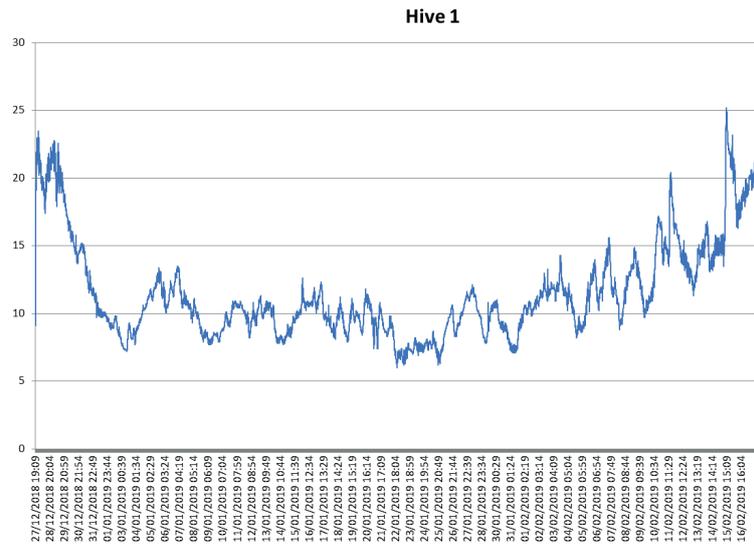
Location of the temperature probe inside the hive

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easy to configure via the PC software, saying the software was self-explanatory and that you couldn't do anything wrong with it. The same applied when it came to getting the logging results, he found the graph came up automatically and he liked being able to access the raw data for further studies. He set the logger to take hive temperature readings each hour, which could then be downloaded to his PC for analysis. From the data recorded, he was able to produce temperature graphs showing the temperature drop and subsequent rise as the bees went into and out of hibernation.



Hive temperatures 28 Dec 2018 to 16 Feb 2019



A jar of Joergen's honey

Joergen has future plans to use the IoT so he can access a web page to easily monitor the weight and temperature of each of his hives. This will provide valuable information about the bees "vigorous" work during the year. For example when the queens start to lay eggs in the spring – this means the beekeeper also needs to pay attention to the bee farm and whether they have sufficient food. Furthermore the weight gives valuable information about when to increase the space available to the queen and her bees, and when to harvest honey. In the autumn the weight will also inform the beekeeper about the amount of food in the hive so he can be sure that there is enough for the family to survive the winter.

"The product is straightforward, very easy to use, setting up and getting readings out. Lascar have been quick in support and very forthcoming."

Joergen Nielsen

If you would like more information on EasyLog products then please see our website or call our Sales Teams:

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