

**21.11.2019**

**102. Tip**

We would like to show you an interesting piece of statistics. We are slowly approaching five thousand recorded inspections from all of you on the probee.cz portal. The average number is 1.5 apiaries and about 10 hives per user.

**103. Tip**

For those who have our acoustic sensors, we would appreciate if you tell us which of your colonies are strong and which are weak. The reason is that we think the behaviour of weak colonies at very low temperatures is different from the behaviour of strong ones. We would like to verify this assumption. If we succeed, ProBee will be able to provide the beekeepers with major help, as it will detect this state without opening the hive.

**104. Tip**

The cameras we have at the apiary bring us picturesque images and it is interesting to see how the countryside changes. In the attachment we send you an example of three images from our apiary taken within one week.

**4.12.2019**

**105. Tip**

In past days, we have increased the computer servers performance, because ProBee users are increasing. Unfortunately, it was not possible without downtime and we apologize for not updated sensor data. Everything should be fine at the moment.

**106. Tip**

Confess 😊 How many of you have been planning to take notes of your beekeeping activities into the ProBee online diary in summer? Now, in addition to treatment, we do not have much beekeeping activities, so it is ideal to start taking notes. Maybe your record will be five thousandth in ProBee.

**107. Tip**

In the 84th tip we informed about a new button "Honey am./feeding" for apiary/hive. Now we have

prepared the same for the feeding summary . Use the appropriate box in the inspection record to enter the amount of feeding and get the sum of feeding for the apiary/hive for the period of your choice.

**10.12.2019**

**108. Tip**

The acoustic sensor in one of our hives has warned us that this colony is more disturbed than the others, and we found the reason after checking the bottom. We carefully close entrances with inserts through which the bee can go, but not the mouse. Despite we found the mess in this hive, as you can see in the attached picture. We have two explanations for this. First - the mouse moved into the hive before the inserts were put on and we imprisoned the mouse there. Second - we left open the hole in the bottom super this time, and the mouse was able to get there. Make sure your hives are secure enough.



**109. Tip**

We are preparing two news in ProBee. First - in a short time ProBee system will learn to analyze and evaluate data from multiple sources (seasons, thermometers, scales, ac. sensors) and soon these outputs will be available to our users. Second - we are testing the first prototype of our inhive camera, which will be able to send images from the hive bottom and we will also offer it to you next year.

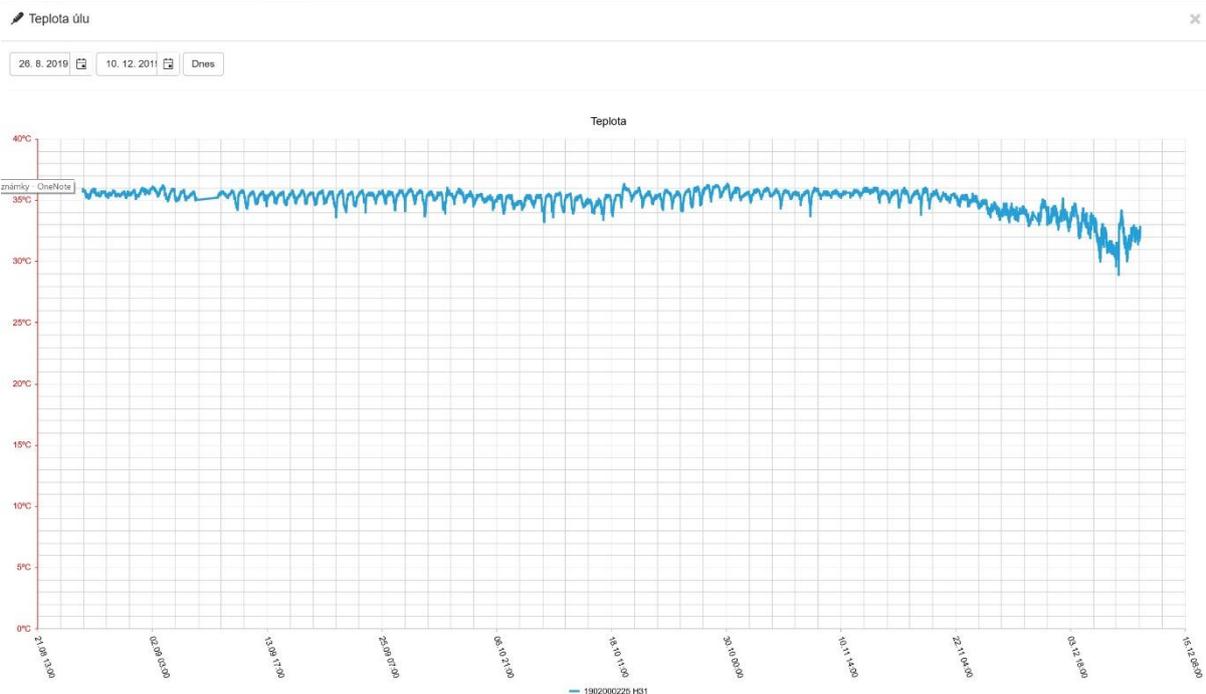
**110. Tip**

In the ProBee system we are preparing a so-called mentor to beekeeper in critical situations. For this purpose, we are looking for an experienced beekeeper who would help us to create a mentor himself. It will be a written text of various topics (e.g. how to manage swarming, how to manage the loss of the queen, ...). For this cooperation we offer bonuses in the form of financial discounts from the use of our equipment.

**17.12.2019**

**111. Tip**

We recently informed you about a drop in temperature in colonies (that is, interruption of laying queen) and these days we have found that this is probably not true for strong colonies. It seems that queens are still laying, as you can see in the attached file. These colonies still hold the temperature inside the cluster, around thirty degrees, and it is indicating the presence of the fetus.



### 112. Tip

This year, there is an increase in excessive bee mortality, so we thought how many of you are treating empty hives (hives without living bees)? If you don't have our acoustic sensors, you have to check whether each hive has its own tenant (not a mouse).

### 113. Tip

Because you are a beekeeper, a beekeeping gift from you would be appropriate. If you are interested we can prepare gift boxes and send you individual products, we still have a chance to send your boxes by Christmas. More on facebook <https://www.facebook.com/voskovovyrobkyamed>.

**1.1.2020**

**114. Tip**

We don't know about the condition of your bees, but we had a beautiful winter flight on 16.12.2019. The temperature was around 9°C and we were able to check the condition of our colonies. Our sensors confirmed the flight.

Happy New Year to you and your bees! We hope our tips and services will entertain you in the future.



**15.1.2020**

**115. Tip**

You may have forgotten that you can store photos for each hive/apiary/inspection. A regular user has a limit of 1 piece to each item, but we have good news for you. You, who use some of our devices (cameras, scales, trackers, ac. and temperature sensors), now have the possibility to store up to 10 photos for each of these items. If you do not belong to this group and still want to use this feature (save more photos), or even 10 pieces are not enough for you, let us know.

**116. Tip**

In a tip 109 we informed you about the upcoming innovations in the automatic analysis of data from scales, temperature and acoustic sensors. Someone who has set up the so-called info channel (for more information about info channels, see e.g. manual "Scale autonomous" or let us know), could know that in the case of a non-standard situation (related to measuring weight, temperature and ac. behavior) there comes a message such as "Swarming mood" or "Winter cold below 0 - silence of weaker colony". We hope that these reports will help you improve the quality of your colony care and will be happy to learn from your comments.

**117. Tip**

We will have a new interesting user, a farmer from Malta has shown interest about our products.

22.1.2020

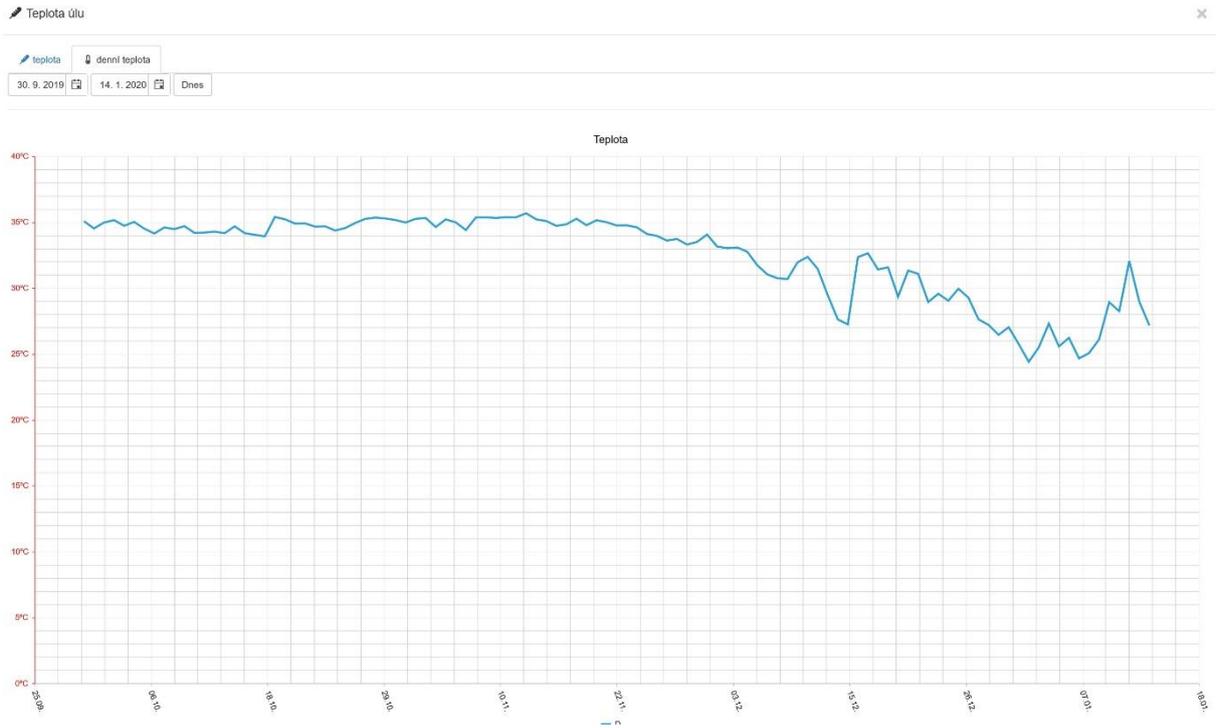
**118. Tip**

If you would like to go to Germany for a beekeeping exhibition, we recommend "Celler Imkertage" on 25 and 26 January 2020. The most interesting thing about this exhibition is that there is a ProBee as one of the exhibitors, so you can speak Czech (or English) at the German exhibition. And those who don't make it to Celle have the same chance in Münster on February 29 and March 1, 2020.



**119. Tip**

In tip 111, we informed you that some strong colonies did not stop laying. Today we can repeat this statement. After this winter we will have to watch the Varroa mite infestation because he was able to hide from us during the winter. If you look at the graphs of your temperature sensors, you may notice a new tab "day temperature". This is the average of the temperature measured only during the day.



**28.1.2020**

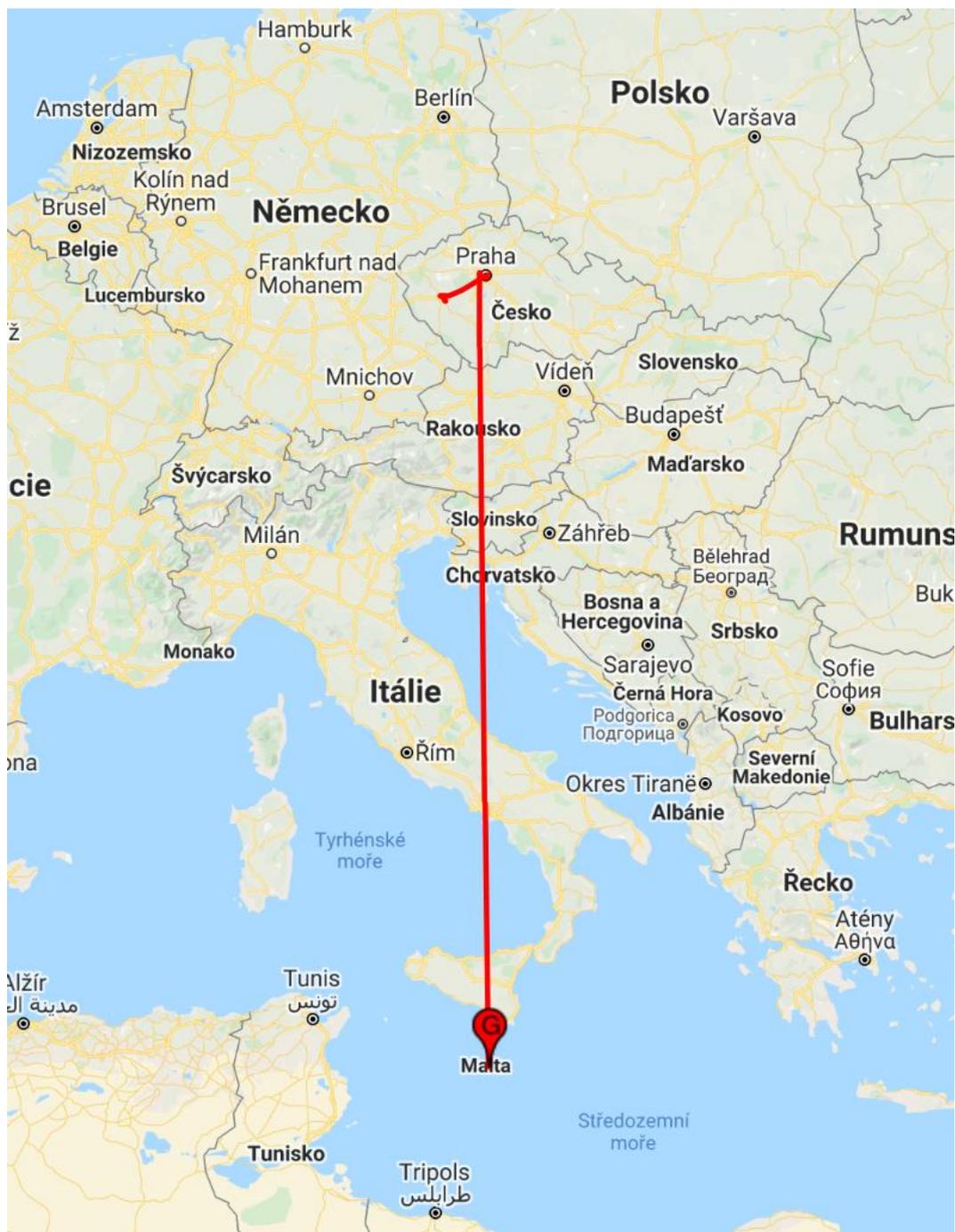
**120. Tip**

Be careful when uploading photos to ProBee. When you press the button  , you can tag one photo from your phone/computer memory. Once you click the "open" button the photo isn't still

fully loaded, which is correct. To final upload, you have to click the button  and at this moment the photo upload is complete.

**121. Tip**

How long does it take for Czech Post to deliver a package to Malta from Losina near Pilsen? The answer is 6 days. If somebody steals a hive with our tracker, we'll track it to Malta.



**122. Tip**

For those who are not yet using our technology we are preparing a demo apiary in spring. On one of our apiaries, we will put all the technologies to several hives and allocate them to a special account that we will make available to the beekeeping public (you). This will enable everyone to experience what ProBee can bring to beekeepers and how easy and addictive it is.

**4.2.2020**

**123. Tip**

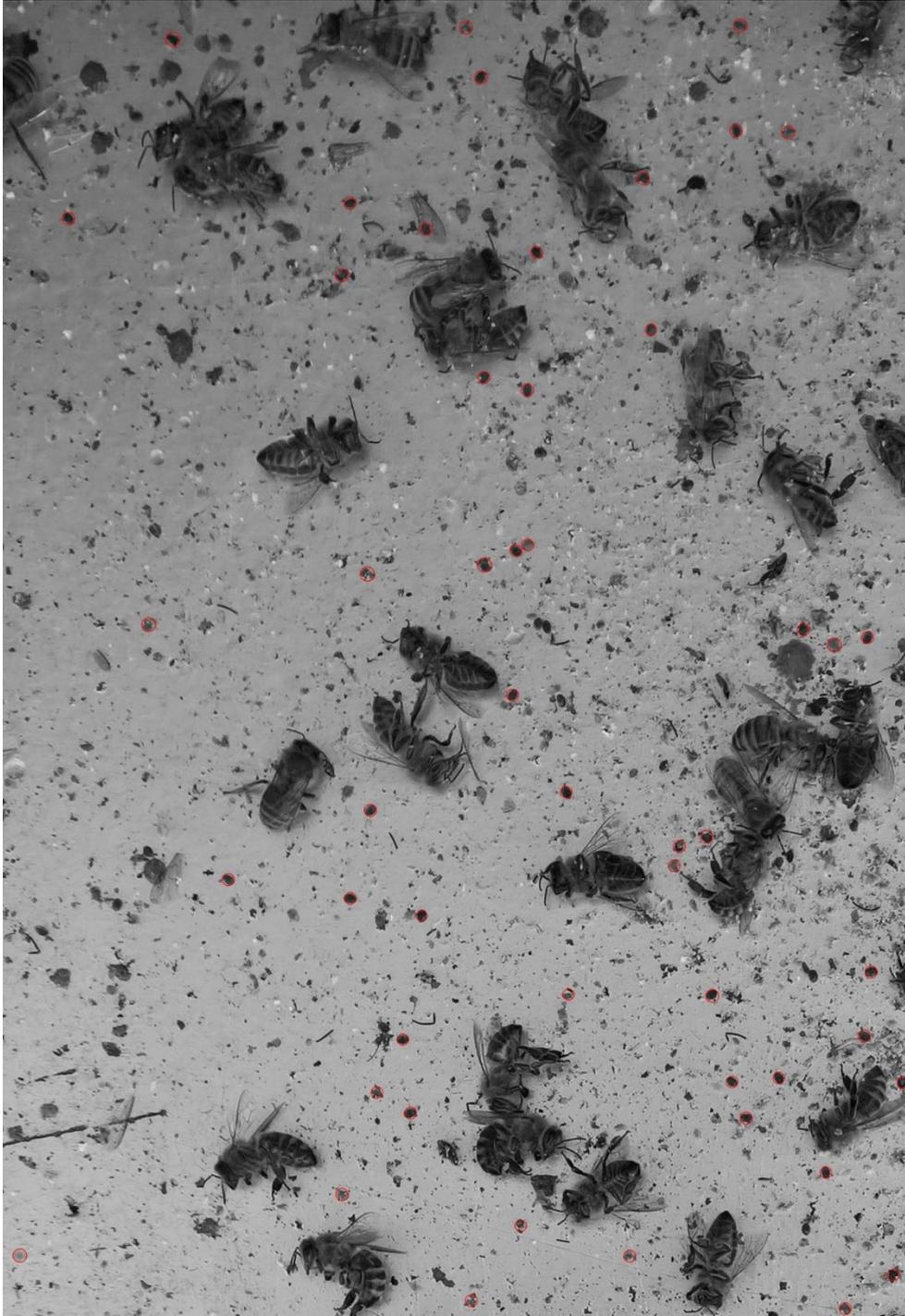
At the end of January we attended the beekeepers show in Celle, Germany. Surprisingly, our GPS trackers were the most attractive for visitors. Even in Germany, hives are frequently stolen. We are very pleased with the interest in our technology and based on the exhibition we are getting the first order from visitors.

#### 124. Tip

The beekeeper sometimes does not think that at 6°C bees may fly out from the hive. As we informed you in the past, we have two hives on the roof of a building in Prague where IBM is based and on 27.1. we accidentally watched a video stream from a camera that occupies an entrance to the hive. To our surprise, there was a lively activity.

#### 125. Tip

On the attached photo you can see what our mite detection system can do on the pat. It is still making mistakes, but we are reaching our goal.



11.2.2020

### 126. Tip

Number of ProBee records is growing, and to be sure that the system responds quickly enough, you can set the date from which the records will be displayed in the hive or apiary inspection. In default settings are displayed data for the last six months, you can change this setting.

The screenshot shows the ProBee web application interface. At the top, there is a navigation bar with the ProBee logo and several menu items: 'Uživ. účet', 'Včelnice', 'Úly', 'Prohl. úlu', 'Prohl. včelnice', 'Nástroje', and an email address 'mach@softech.cz'. Below the navigation bar, the page title is 'Úl - prohlídky'. There are three input fields for filtering: 'Výběr včelnice', 'Výběr úlu' (set to 'H01'), and 'Datum od' (set to '4. 8. 2019'). Below these fields are several colored buttons: 'Mapa včelnice', 'Předpověď počasí', 'Teplota v úlu', '2 Fotogalerie včelnice', '0 Fotogalerie úlu', and 'Tracker úlu'. At the bottom, there is a table with columns: 'Datum čas', 'Popis', 'Poznámky', 'Plod', 'Síla', and 'Počasí'. The table has a search bar and a 'Založit novou prohlídku úlu' button. The table content is mostly empty, with a temperature indicator of 4°C at the bottom right.

### 127. Tip

4.2. has been launched a new version of the IBM Watson Artificial Intelligence model to better

recognizing the states and reporting them. After clicking on the icon  or  you can see

the current state in the last hour and also see a history button  that shows you all the past. We will be grateful for any comments from those who use our sensors.

### 128. Tip

Do you like QR codes? Would you like to create a new inspection with one click for a particular hive? A simple sticker on the hive will ensure and solve this. Another use of the QR code will be on the fallout pad. Scanning the code with your mobile phone will also create a new inspection and save the pad photo.

18.2.2020

### 129. Tip

Do you know what adrenaline beekeeping is? See the attachment for more. You may have experienced something similar. The cover fell from several hives and they were fully opened. However, the temperature sensors in the cluster showed a decrease of only 1-2 degrees. The conclusion is that the colony that has been ok has survived for two days in very unpleasant conditions (rain and snow).



**130. Tip**

Are you looking forward to spring? If yes, wait or move with the bees to Malta. One of our users has had a constant temperature of 15-20 degrees on his apiary in past few days.

**131. Tip**

Due to the almost permanent existence of the fetus in colonies during this mild winter, a faster decline of reserves can be expected. For example, one of our colonies has lost nearly 15 kilograms since the beginning of September. This year we have fed 25 kilograms of solution, so we know the reserve is still there. In warmer days in the last two weeks, weight loss has been faster and the colony has lost 2 kilograms. If this goes on, the colony has reserves for 2.5 months.

**25.2.2020**

**132. Tip**

We still do not have any co-worker who would like to become famous by creating a mentor to a new beekeeper (on our site). Do you want to write?

**133. Tip**

In the attachment you can find a snapshot of our first bottom camera prototype. Mass production start is coming.



#### **134. Tip**

In tip 128 we informed you about the planned simplification of making records on apiary using so-called QR codes. This option is already fully functional! To print the QR codes for your hives, go to the Tools/QR driven actions. There are three types of codes for creating an inspection:

- create an inspection in which you can upload the text of the inspection directly by voice.
- upload any image
- upload an image of the pad with Varroa mites

Try and send us your comments. You can print the codes yourself or we can print and laminate them into a durable cover.

**9.3.2020**

#### **135. Tip**

How did your hives survive the second storm two weeks ago? We only picked up two roofs and one empty hive.



SUNTEK PBO011 02/25/2020 12:03:21 4°C/39°F 100%

**136. Tip**

We examined the acoustic records from the fall and found that the bees which died because of Varroasis disappeared within four days. We were surprised that the mortality is so fast and can really be called colony collapse.

**137. Tip**

Thanks to acoustic recordings, we also mapped the process of the robbery before summer. For a weaker colony, thieves need 3 days to complete stock clearance. Sensors helped us to detect bee colonies, where at the same time there was a significant increase in activity and lasted the following night (just like thickening nectar in a summer flow).

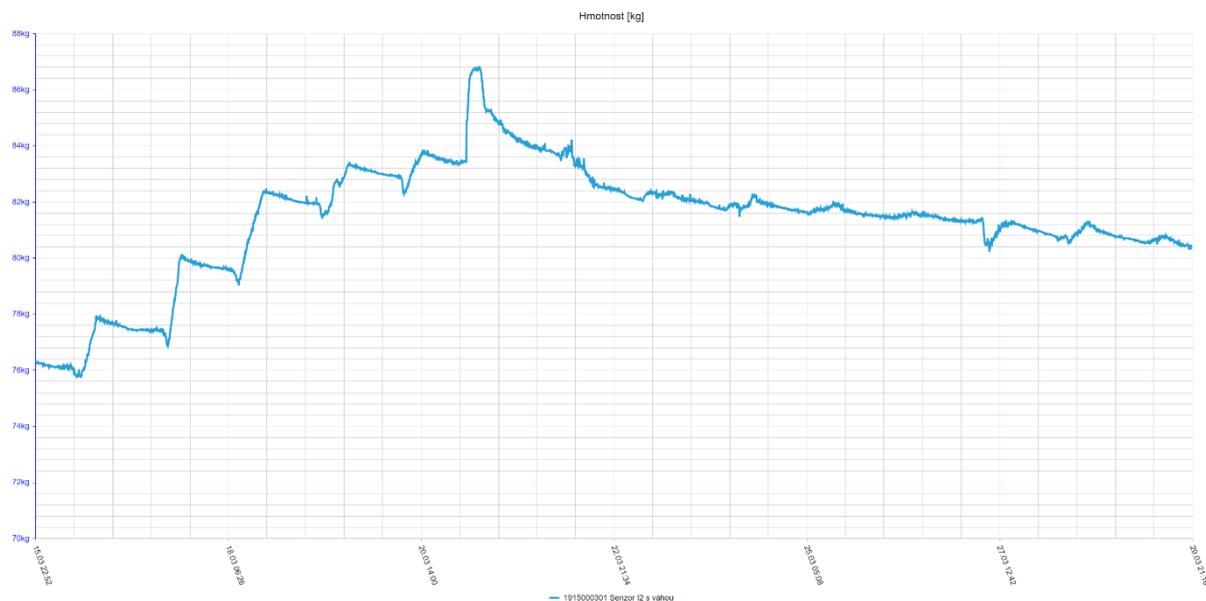
**28.3.2020**

**138. Tip**

In these days it is very good time for beekeeping. And because two of our colonies are on the roof of the IBM building in Prague, which we can't get to now, we can diligently beekeep from the comfort of our home and remotely watch them. In the attachment you can find a graph of the scale from 13.3. to 20.3. The season has begun.



18. 3. 2020 29. 3. 2020 Dnes



### 23.4.2020

#### 144. Tip

It is a pleasure to watch the growth of the bees in these days. We have apiaries in different places from Domažlice to Prague and we watch how different areas differ from each other. A strong harvest has been raging in Prague for a long time, it is starting in Pilsen and is just getting ready in Domažlice.

#### 145. Tip

We have significantly improved the display of maps in our application. The maps can be used on the home page in the map of apiaries and trackers. Streetview also works here if a google car has visited your apiary.

#### 146. Tip

The current situation allows us to visit apiaries without restrictions, but we are still not there. If you are worried about the security of your hives, try our GPS trackers. You can also have them for free for a month. You can find more about the capabilities of trackers on the home page [www.probee.cz](http://www.probee.cz)

### 11.05.2020

#### 147. Tip

We would like to inform you about an extremely interesting news from the ProBee portal. Finally, we managed to put into operation the automatic detection of Varroa mites on the pad. You can find the



function in the hive inspections (NOT the apiary), under the blue icon with a beetle . If you do not have this column displayed, it is called Varroa\_comand\_column (instructions on how to display the column can be found in the manual). Uploading photos works the same as in most photo galleries. After sending the selected photo, the number of mites will be immediately evaluated and recorded in the appropriate field of the inspection. An image with marked mites is also available for check. Please be patient, we are constantly refining the recognition of mites. On the contrary, we welcome any comments and testing on your side. In the main manual „EN Help and manual for ProBee.pdf“ (in the second half of the third page) you will find the recommended procedure for photographing pads with a fall. If you keep it, it will significantly increase the accuracy of mite detection. Recognition is oriented according to the QR code.

**148. Tip**

We have already informed you about the possibility of using printed QR codes for easy taking of inspections by dictating and saving photos for inspections. Because users like it very much, on Facebook we have prepared a video for you about how easy it is:

<https://www.facebook.com/probee.cz/videos/277683283624959>

**149. Tip**

We have updated all manuals and added illustrative photos.

**8.6.2020****150. Tip**

We are still a long way from series production, but we still want to show you another device from the Probee group, whose prototype we have just put into operation. This is a small camera that takes one shot a day from anywhere in the hive, most often from the bottom. Collecting video from images of this inhive camera can be found on <https://youtu.be/Gk8lE0hSmk4>. The camera box is printed on a 3D printer.