

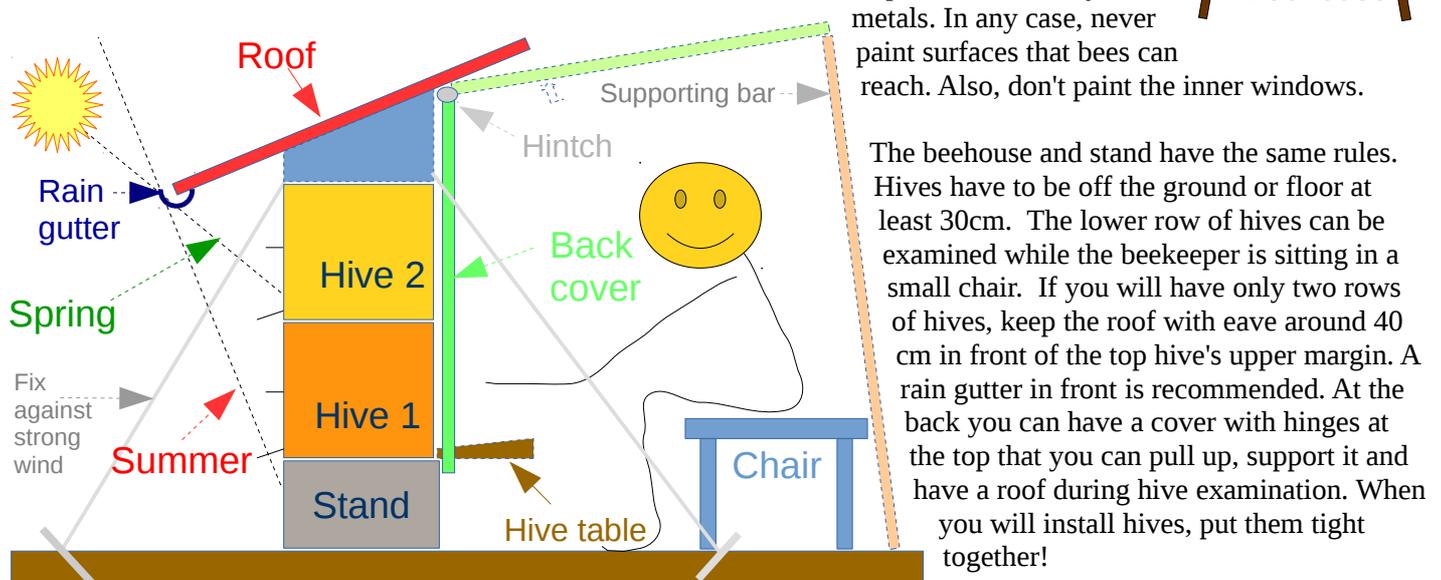
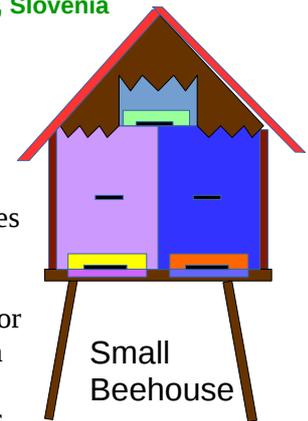
Instruction sheet to start beekeeping in Slovenian hives (AŽ*)

Written by: **Dr. Janko Božič**, University of Ljubljana, Biotechnical Faculty, Department of Biology, Slovenia
janko.bozic@bf.uni-lj.si, <http://web.bf.uni-lj.si/jbozic/>

Edited by: **William Blomstedt**, Blomst d.o.o. Cesta na Polje 2, Log Vas 1358, Slovenia

Hive preparation

Slovenian hives are designed to be used in a bee house and therefore they are protected on all sides except for the front. In general it is enough to paint only the front and additional inch at the side. Use acrylic colors and do 2-3 coats. The third one could even be a painting. Make each hive or at least the balcony around the hive entrance a separate color. Use light colors and never use the color red, which is like a black for bees. If you wish to paint other sides of the hive use one coat with a finish based on linseed oil. Be careful that it does not contain harmful compounds like heavy

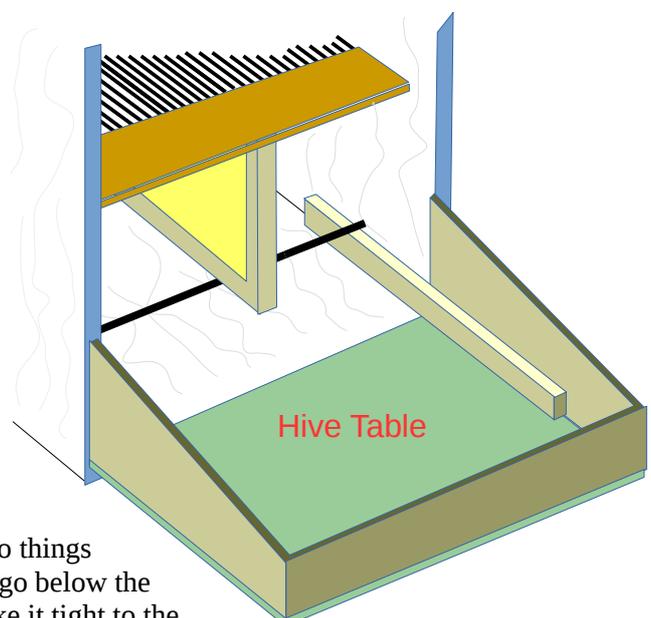


Installing new packages or a swarm of bees

Place a cover under the 3 steel bars and on top of the queen excluder. Press the cover firmly down with the steel bars. Close the super with inner window (use two empty frames to fix it). Then place 10 frames prepared with wax foundations in the lower brood section. Have the inner window ready at the side for when bees will be on the combs. Next place the hive table at the bottom below the still bars. Take the queen cage out of the box with the package bees and hang on a middle frame with foundation wire approximately one third from the back and the top. Before adding bees, remove plastic tab at queen cage at sugar patty section so they will release in the next few hours. Then place the package on the hive table with one open side facing the frames with foundations. If needed, shake the box slightly, sprinkle water or use smoke to push the bees inside of the hive (Don't agitate them!). A hive brush could be useful as well. During preparations for the installation of a package or swarm into a new hive it is best to reduce the amount of light in the bee house to prevent the bees from flying towards the light source.

How to make hive table?

I suggest to make from wood and plywood. It can be used for century or even more. If you don't have materials at hand, you can improvise with cardboard, at least for hiving a swarm. For examination of the hive it is better to prepare wooden one. Two things that you need to take care: (1) Installation wooden bars has to go below the first still bar at the bottom of the hive to be fixed well. (2) Make it tight to the hive, so that that bees will not crawl bellow that table. I also recommend to use frame stand and spacer (see photo on second page).



Summer development of the colony

If there is no natural nectar, you must feed bees half a liter (two cups) of 50% sugar solution each second day. If there are several consecutive rainy days, start feeding on the second day. If you are expecting a nectar flow where you will extract honey, then beware of feeding so they will not store processed sugar solution in honey section. In the first year this will not be the case, since you will have only brood section filled with the combs.

It is also possible to put sugar patties on top of the frames with brood if the honey super is empty. One possibility is to put patties on the queen excluder, keep some space in front so bees can reach the top and cover patty with plastic foil or even extra board. You might be able to combine it with queen excluder cover if it is along the whole width of the inner hive. You may feel more comfortable to put a wooden cover over the entire area front to the back, to ensure the bees remain below the cover on top of the patty. Another possibility is a bottle feeder in front of the hive. In that case be careful that you will not spill some sugar solution around the hive entrance. During summer that can cause robbing.

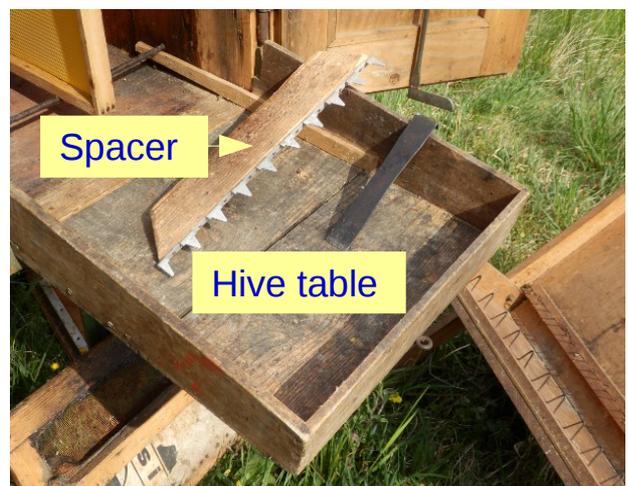
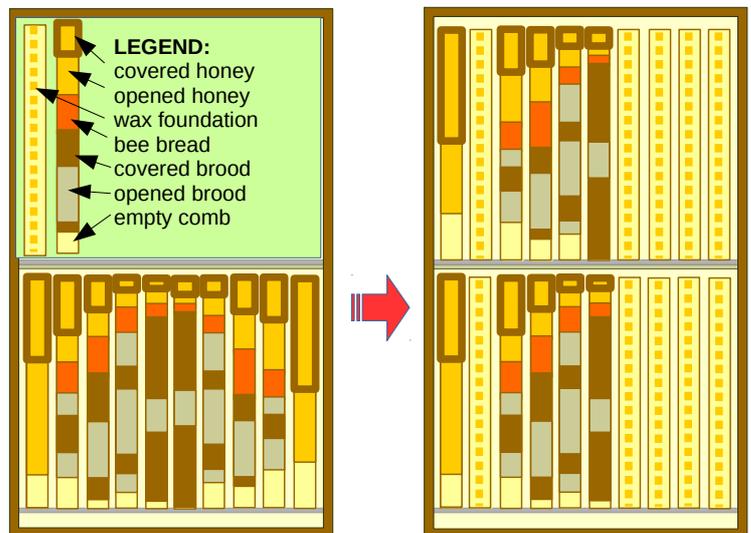
If you will have fast development of the colony you can allow the colony to expand in the honey section or make additional split. To split you need at least 8 combs of brood. For colony enlargement, select 4 full frames of covered brood and leave them on comb stand.

During comb inspection check for the queen. You will have to leave the frame with the queen in the brood section, where you put from the side first honey comb, frame with foundation, 4 brood frames with the queen in the middle and additional frames with foundations. In the honey section, put in the same order combs and foundations. Brood combs have to be aligned in both sections to improve thermoregulation in the disturbed colony. If it is a good year, you could still harvest honey from this new colony.

Another important task of the summer is to fight Varroa mites. In the first year you can start immediately after colony establishment, otherwise wait until after the last honey extraction. The Slovene hive is nicely equipped with wire mesh bottom control boards. Use petroleum jelly on the paper sheet (or hard plate) inside the control board to ensure that the Varroa can not climb back into the hive and also to prevent ants from removing the dead mites. You have to check regularly, at least 14 days to see Varroa mite fall related with natural fall or due to your treatment. After evaluation of the number of mites, clean the board well and if necessarily to renew petroleum jelly cover. The cover can be prepared using spatula.

How you can apply different treatment in Slovenian hive?

My favorite application is formic acid with paper evaporator. Some evaporators can be hooked to the back door with mounted holder. These are easy to refill. Use 80% formic acid and take all necessary safety precautions. Purchase plastic bottles



that can be topped with an evaporator. When you have empty honey section, I would recommend placing two empty frames on the top and closing the inner window. Inside the window put a few sheets of old newspaper to reduce evaporation of formic acid in empty honey section. Thymol can also be used in a similar way. With both treatments you have to monitor evaporation and efficiency as well as the control sheets in the bottom of the hive. It is also a good idea to check brood, preferably drone brood, if it is still present in drone frame, or at least use a powder sugar test on adult worker bees. Preparations hung on the inside of the hive on the frames can be used in similar way in Slovenian hive. Evaporative pads based on Thymol or formic acid can be hung in the empty honey section or on the top on queen excluder. In the case of formic acid, you have to be careful not to have direct contact of formic acid preparation to the steel. Even stainless steel can oxidize under extreme acidity. Gel formic acid pads can be most likely used also hanging at the back at the inner side of the hive door.

*AŽ = Alberti Žnideršič Hive; Anton Žnideršič adapted (changed much) Alberti's hive and was later named by Slovenians "AŽ hive".