



ALTERNATIVE BEE HIVE CASE STUDY: TOP BAR HIVE



The standard hive in Nebraska is a traditional Langstroth. The Center for Rural Affairs conducted a research project with outside beekeepers, designed to compare and highlight four alternative hive structures: Nuc, Shallow, Top Bar, and Long Langstroth. Each beekeeper was required to keep an alternative hive, as well as two traditional Langstroth hives to use as controls.



This is real-life feedback over the course of three years from two seasoned beekeepers. To learn more about our work with beginning farmers and beekeepers, visit cfra.org/farmers.



BEEKEEPER A:

- Seven years experience
- Saunders County, Nebraska

Hive location details:

Windbreak – Small shed nearby

Sunlight amount – Late afternoon partial shade

Water access – Pond on property

Floral resources – Various pollinator plots, Seed a Legacy program in our area, abundance of alfalfa close by



BEEKEEPER B:

- Five years experience
- Saunders County, Nebraska

Hive location details:

Windbreak – Windbreak to the north

Sunlight amount – Full sun all day; late-afternoon shade from barn

Water access – A few creeks and bird baths on property; neighbor's pool

Floral resources – A few acres of wildflowers (bird, bee, and wildflower seed mixes)

- > Oriented horizontally, with sloped sides.
- > Typically produce cut comb. No need to lift boxes to inspect the hive.
- > Takes bees longer to grow the hive since they have to draw out all of the comb from scratch, rather than having a template or drawn out frames (like in a traditional Langstroth hive).
- > If bars are not spaced correctly, bees will build cross comb that needs removal prior to inspection.



PROS

BEEKEEPER A:

- None

BEEKEEPER B:

- Natural habitat for bees
- Neat to watch the bees build the comb and manage the hive by themselves
- Smelled really good
- Aesthetically pleasing

CONS

BEEKEEPER A:

- Did not do well in the winter
- Constant battle with mice
- Always making cross comb
- Heat made the wax very fragile, which made for slow work

BEEKEEPER B:

- Messy and frustrating for beekeeper and bees to get in the hives
- Hard to harvest anything, except when it fell off
- More bees were harmed or killed than normal
- A lot of mice in the winter



TIMELINE AND EXPERIENCE

BEEKEEPER A:



YEAR ONE - 2020

- Bees arrived in April. Installation went well and bases were level. Used recycled carpet under hives. Packages and queens were healthy and started laying in all hives. Overall, easy hive install.
- Fed bees in the spring using the Rocky Mountain Dry Method.
- New comb was really fragile and challenging to lift without breaking.
- A lot of cross comb (bees built comb across frames).
- Very dry spring.
- No honey harvested.
- Treated for mites in the fall with oxalic acid.
- Feeding sugar water in the fall was a challenge because the sugar water leaked.
- Mice moved in over the winter and no hives survived.

YEAR TWO - 2021

- Bees arrived in April.
- Installation went well.
- Had issues with the queen bee in the summer.
- No honey harvested.
- Treatment for mites in the fall with Apiguard.
- Dry fed the bees over the fall.
- Winter was dry and warm.
- No hives survived the winter.



YEAR THREE - 2022

- Bees arrived in April.
- After installing bees, they all absconded.



BEEKEEPER B:



YEAR ONE - 2020

- Bees arrived in April. Easy to install the hive because there was nothing in the box.
- Hive cover was a little large to handle alone and bees had not glued down the bars yet.
- Fed bees in the spring (more than previous years).
- Initially enjoyed the Top Bar hive, specifically the way it smelled and the more natural way the bees built within.
- Struggled with handling the frames.
- No honey harvested.
- Treatment for mites in the fall with Apivar.
- Fed sugar water in the fall.
- No hives survived the winter and mice moved in.

YEAR TWO - 2021

- Bees arrived in April; all hives replaced.
- Hives were more difficult to work with as the bees didn't enjoy the setup.
- Frustrating experience to move or replace frames (would anger the bees).
- Treatment for mites in the spring with Apivar strips and Hop Guard. Bees did not enjoy the Hop Guard strips; were molasses and not easy to work with.
- Noticed population dwindling in the fall.
- Fed sugar water in the fall; bees seemed healthy.
- Cold, dry winter.
- No honey harvested.
- No hives survived the winter.

YEAR THREE - 2022

- All bees were replaced in April.
- Wind affected the quality of replacement bees; they were weak and not as many as usual.
- Fed bees in the spring.
- Very dry summer.
- Treatment for mites in the fall with Apiguard.
- No honey harvested.



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