

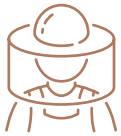


# ALTERNATIVE BEE HIVE CASE STUDY: LONG LANGSTROTH HIVE

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](http://cfra.org/farmers).



## BEEKEEPER A:

- Five years experience
- Seward County, Nebraska

### Hive location details:

**Windbreak** – Windbreak to the north

**Sunlight amount** – Oriented to south and east; in the sun 95% of the day

**Water access** – Creeks and ponds on property; cattle tanks

**Floral resources** – Neighbor has monarch butterfly plantings and 700 acres of cover crops; variety of wildflowers, alfalfa, fruit trees in area; added sunflowers and tomatoes in year three



## 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)



- > Uses Langstroth frames, but the hive is oriented horizontally instead of vertically.
- > No need to lift boxes off the hive to inspect the brood area.
- > Can hold anywhere between 20 to 30 frames depending on how long they are.
- > Some beekeepers will add supers (upper-story hive box) on top, generally in the middle of the hive.



## PROS

### BEEKEEPER A:

- Inspection is easy; good snapshot of the overall health of the hive
- Beekeeper can get in and out of the hive quickly, which is best for the hive
- Would make a good breeding hive

### BEEKEEPER B:

- Not very tall so it is easy on one's back
- Three lids allows beekeeper to move from one area to another without disturbing the colony very much
- Easy to feed in the back of the box
- Even with a super added to the top, it isn't very tall and easy to work with

## CONS

### BEEKEEPER A:

- Poor ventilation; difficult to get air to move to the back
- Condensation, mold, and wood warping
- Can be unstable
- Difficult to build up

### BEEKEEPER B:

- Wood swelling and bowing common, which causes gaps
- Entrances need to be along the long side of the hive; bees have a hard time getting out when the entrances are in the middle or back of hive



# TIMELINE AND EXPERIENCE

## BEEKEEPER A:



### YEAR ONE - 2020

- Happy and healthy bees arrived in April.
- Fed sugar water in the spring.
- Built out comb really quickly.
- Colony was well throughout the year.
- No honey was harvested.
- Preventive treatment for mites in the fall with oxalic acid.
- Fed sugar water in the fall.
- Insulated wrap used for overwintering.
- A lot of heavy snowfall in the winter.
- One hive survived the winter.

### YEAR TWO - 2021

- One hive replaced with new bees in April.
- Wet spring; nectar was diluted, pollen was wet, too much water, not a lot of sunshine.
- Bees were fed in the spring.
- Preventative treatment for mites in the spring with oxalic acid.
- Hot and dry summer, no goldenrod present due to drought.
- No honey harvested.
- No fall feeding.
- Preventive treatment for mites in the fall with oxalic acid.
- Insulated wrap used for overwintering.
- Warm, mild winter, didn't stay cold.
- Bees gone in the spring, but all honey remained; possible swarm or absconded late in the year.

### YEAR THREE - 2022

- All bees were replaced in April after a hard winter (lost 20 hives including both long Langstroths).
- Spring was cold, windy, and unpredictable.
- Wind affected the quality of replacement bees; they were weak and not as many as usual.
- Fed sugar water in the spring.
- Summer was hot with little rain.
- No honey harvested.



## BEEKEEPER B:



### YEAR ONE - 2020

- Bees arrived in April.
- Fed bees in the spring (more than past years).
- Took bees longer to get started.
- No honey harvested.
- Treatment for mites in the fall with Apivar strips.
- Fed sugar water in the fall.
- No hives survived the winter.

### YEAR TWO - 2021

- Both hives were replaced. Bees arrived in April.
- 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.
- Harvested four gallons of honey.



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