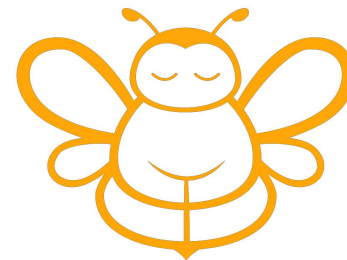


The LES-IS-MORE Horizontal Hive[®] Plans



BEE MINDFUL

HAPPY BEES, NATURALLY

This standardized horizontal hive was designed by Les Crowder and Nathalie B. of Bee Mindful, LLC under the name of “**The LES-IS-MORE Horizontal Hive[®]**”

Copyright to the drawings for “**The LES-IS-MORE Horizontal Hive[®]**” here below are retained by **Bee Mindful, LLC**, who hereby grants permission to fellow beekeepers to freely duplicate and distribute said drawings in printed and electronic form provided that:

1. Distributed plans are not sold but distributed free of charge to all
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In addition, for all hives or hive kits built to the basic dimensions as listed on the dimension pages of these specs (same angle/width/bar dimensions and all variable lengths of side walls or number of partitions), credit be given clearly and unequivocally to **Bee Mindful, LLC** as being a “**LES-IS-MORE Horizontal Hive[®]**” before being posted online, sold or distributed in any way.



Our goal is to make these simple hives available to as many people as possible, and to create a standard in Horizontal Top-Bar Beekeeping, so everyone may produce or find NUCs of bees that easily fit these hives. We encourage everyone to make them for themselves, or to sell them as a source of income. They cost only about \$60 in new materials and 2hrs of time, and can easily host two ~10 gallon colonies. NUCs of bees sell for \$350 in Texas, because the demand is high and the supply/competition low, so they are a great way to start on a budget AND to make good income if desired. They are also simple and easy to use and manage.

In exchange, all we ask for is the credit for their design and your support to spread the word to others about horizontal top-bar hive beekeeping.

Questions and suggestions for improvements may be submitted to Bee Mindful, LLC at

Bee-Mindful.com or BeeMindfulHoneyFarms@gmail.com
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Les Crowder + Nathalie B. = Bee Mindful!



Les Crowder, co-author of the world-renowned book “Top-Bar Beekeeping”, is a veteran of the beekeeping world, and a widely recognized expert in Natural and Horizontal Beekeeping. He began keeping bees (he often states they began keeping him) in 1971! Early in his career, he worked for a business with 4,000 hives in New Mexico, then started looking for ways to eliminate toxic inputs in the hive, starting with antibiotics and now miticides. As a successful Treatment-Free beekeeper over the last 30 years, he promotes increasing colony vitality by using natural comb, and decreasing the pressure of pathogenic fungi and bacteria that stress the bees’ resistance to disease by cycling out old comb.

This led him to experiment with the ancient concept of Horizontal Top-Bar hives, and eventually using them exclusively for a small 100-200 hive honey and beeswax business in New Mexico.

Through large scale experiments, he discovered the key to comb structural integrity (and a low rate of comb collapse or wall attachments) is to use a 30 degree slant of the long walls of the hive, longer attachments to the top-bars, and a shallower depth of comb than in most other Top-Bar Hive designs.

It turns out that the 30 degree angle is the angle that repeats in hexagons, the structurally efficient shape bees use for their cells, so Les’s plans naturally follow bee wisdom, and his hive even features a half hexagon for end pieces!

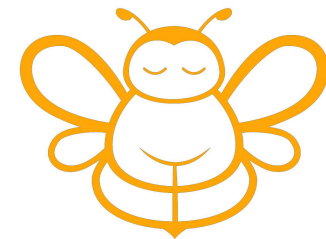
Les has a degree in biology from the University of New Mexico, and has served as the President of the New Mexico Beekeepers Association, as well as New Mexico Apiary Inspector. He’s also a philosophe in his spare time.

Nathalie B. is a disciple (groupie, really) and friend of Les Crowder’s, and has always kept her bees Treatment-Free since she started beekeeping in 2011. Now she has the immense privilege and pleasure of working with Les every day at Bee Mindful, managing over 300 colonies through several counties, and offering popular Natural Beekeeping Apprenticeships & classes, as well as professional AG exemption services and affordable horizontal hives. She recently used her engineering/math skills to redesign and optimize Les’s hive plans, simplify the assembly process, and allow for easy Langstroth to Horizontal Top-Bar Hive conversion, rebranding the new 3-in-1 the “**Les-Is-More® Hive**” (pun intended).

Nathalie holds an MBA from Ohio State and a Master Beekeeper degree from Texas A&M. She is also a contributor to Bee Culture magazine, the founder of the first Treatment-Free beekeeping club in Texas, and of the World Bee Day Natural Beekeeping Webinar. She hosts the “Natural Beekeeping Corner” on the popular “Hive Jive” beekeeping podcast. She has served as President of the Hays County Beekeepers Association, VP of the Travis County Beekeepers Association, a Director at the Texas Beekeepers Association, and Chairman of the Real Texas Honey non-profit.

Passionate about community outreach and volunteering that matters, she has set up free training programs and teaching apiaries for refugees in the Congo, Nigeria, and Texas, donating and leveraging many of the simple, cost conscious, easy to manage and sustainable horizontal frameless **Les-Is-More®** hives in the process.

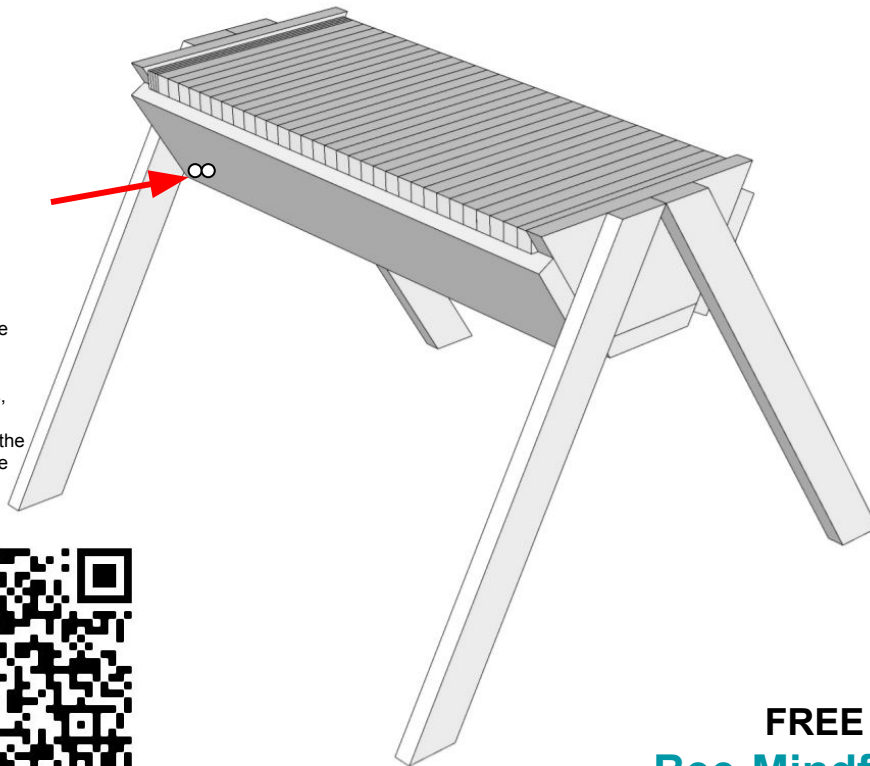
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HAPPY BEES, NATURALLY

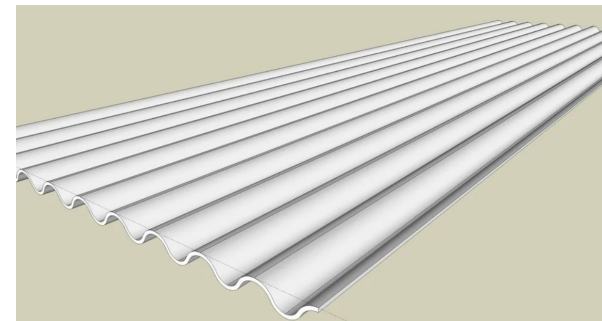
BASIC DESIGN: Single LES-IS-MORE Horizontal Hive[©]



ENTRANCE:

A couple of 3/4in holes on the bottom end of the long board

For double hives, repeat on the opposite side of the partition, near the end pieces.



This hive requires a rain cover, such as corrugated metal



FREE PLANS @
Bee-Mindful.com/plans

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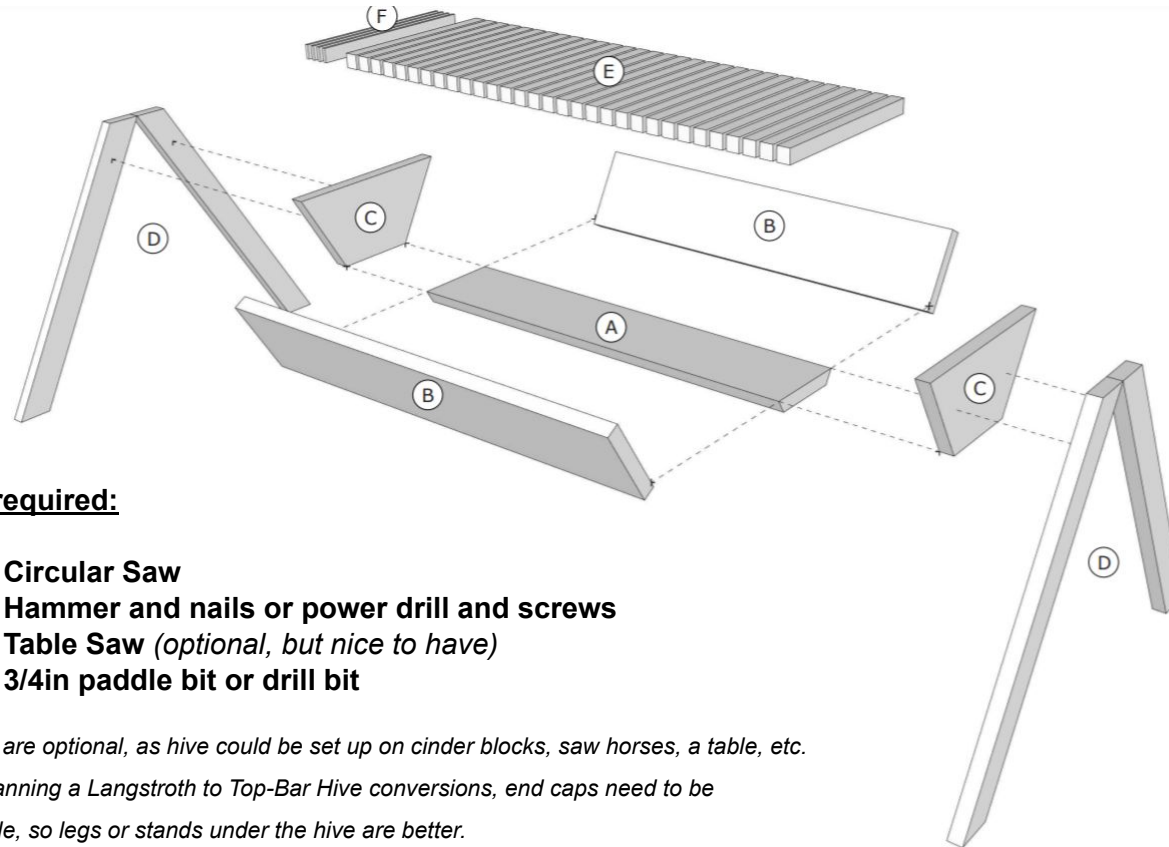
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Assembly



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Tools required:

- **Circular Saw**
- **Hammer and nails or power drill and screws**
- **Table Saw** (*optional, but nice to have*)
- **3/4in paddle bit or drill bit**

Legs (D) are optional, as hive could be set up on cinder blocks, saw horses, a table, etc.

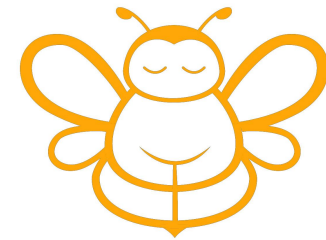
When planning a Langstroth to Top-Bar Hive conversions, end caps need to be removable, so legs or stands under the hive are better.

Unless otherwise specified, all angled cuts are at 30°



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Materials List & Building Instructions



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HAPPY BEES, NATURALLY

Hive Body

- 3 boards of 2" x 10" x 8', untreated dimensional lumber (actual size 1-1/2" x 9-1/4" x 8') - about \$8 each, \$24 total
- 5ft corrugated metal roofing (half of a 10ft piece) - about \$14
- 3" deck screws, 16 per hive
- 2 disc entrance reducers (optional)
- Bamboo skewers (optional)
- Wood glue like Titebond III (optional)

Legs (optional)

- 2 boards of 2" x 4" x 8' dimensional lumber (actual size 1-1/2" x 3-1/2" x 8') - about \$3 each for untreated
- 3" deck screws, 6 per leg set, 12 per hive
- 2.5" deck screws, 4 per leg set, 8 per hive

Tools list

You can complete this project using a variety of tools. Here are the basic ones:

- Table saw.
- Sliding miter saw (*alternative*: circular saw or hand saw with a guide).
- Cordless drill; small bit for pilot holes or ; 1/2" bit for ventilation holes; driver bits for screws.
- 3/4" paddle bit.
- Tape measure, metal shears.

Building instructions

Step 1. Cut 2 of the "two-by-ten" board in half into four 4ft long pieces. 2 of those long pieces will be the side walls.

Step 2. Rip one of the 4ft long pieces of "two-by-ten" boards at opposite 30 degree angles length wise to make a tapered board with 9-1/4" wide and that much less at the bottom (approximately "). This will be the bottom board.

Step 3. Cut the end pieces - Out of the leftover "two-by-ten" by 4ft board, cut one end at 30 degrees angle from the tip of the board (which will look like half a triangle). Flip the board over from you toward the saw. On the shorter of the lengths, measure 9-1/4" and cut from there at a 30 degree angle, shaping the piece as a half hexagon, trapezoidal end piece. You will need two end pieces for the single hive, three if you want a center partition to make it a double (one screw on each side to attach, and caulked to avoid any communication between the 2 colonies - still easily removable to accommodate a large single colony when the time comes)

Step 4. Cut the last "two-by-ten" board in 20in sections lengthwise, then rip each section into 1-3/8 wide bars. Keep any leftover strips for shims

Step 5. Cut the 10ft corrugated metal board in half length wise and use one half (5ft long) as a rain cover/roof (tied on for budget option, with sections of two-by-four and hinges and the metal roof attached with roofing screws for hinged version, or more complex roof structures - see our website for examples)

Step 6. You may use cinder blocks, saw horses, benches or tables or other legs for the hive, or you may build your own, per the plans design or anything else you'd like.



The LES-IS-MORE Horizontal Hive[©] Plans

Cutting List



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Based on US dimensional lumber boards of 2in x 10in (actual size = 1-1/2in x 9-1/4in)

ITEM	NAME	QUANTITY	DIMENSIONS	Boards used
A	Bottom Board	1	9-1/4in x 4ft	two-by-ten
B	Wall	2	9-1/4in x 4ft	two-by-ten
C	End Caps & Partition	2 for single, 3 for double	9-1/4in small base of the trapezoid, cut at a 30 degree angle on both sides (resulting in a long base of about 20in)	two-by-ten
E	Bar	31	20in x 1-3/8in **	two-by-ten
F	Shim	4	20in x various widths (1/4in to 3/4in)	two-by-ten

OPTIONAL OR CUSTOMIZABLE

D	Leg	4	40in long (suggested)	two-by-four
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* make more end caps and use as partitions for additional colonies

** bee space may vary depending on your bee sub-species - adapt accordingly



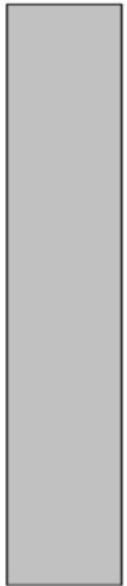
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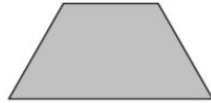
(A)
x1
*Beveled at 30°
on the long edge*



(B)
x2



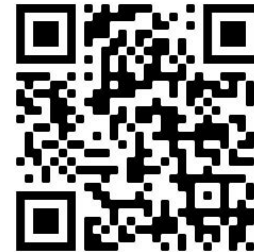
(C)
x2+



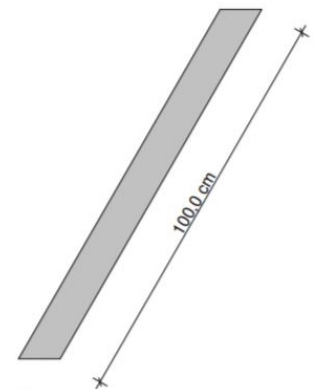
(E)
x31



(F)
x4+

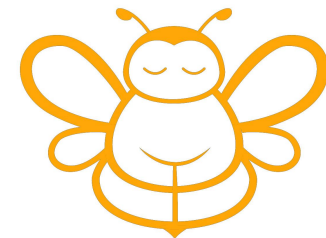


(D)
x4



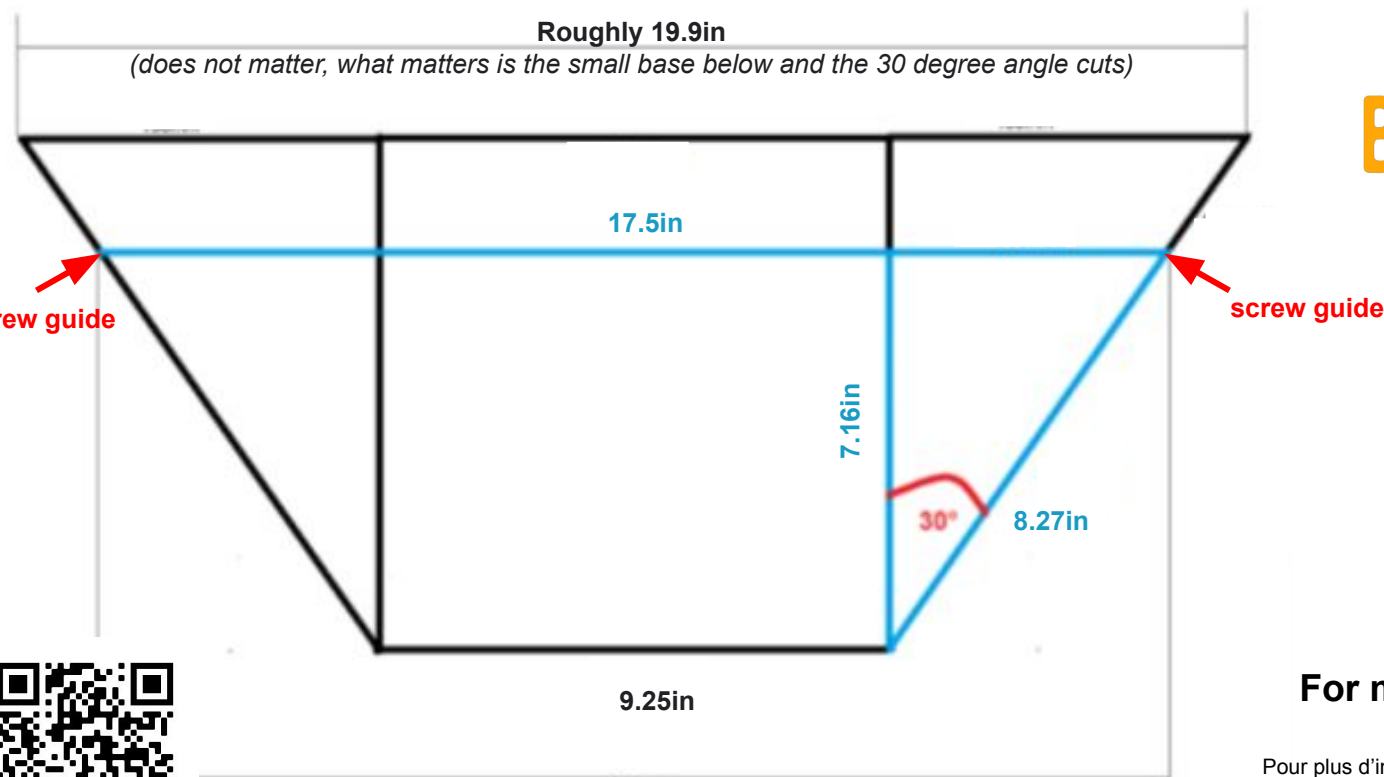
For more information on Top-Bar Hives:
www.Bee-Mindful.com/plans

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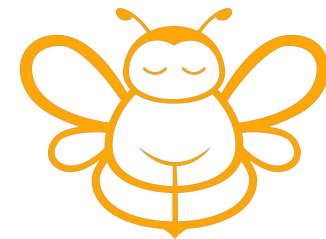


**For more information on
Top-Bar Hives:**

Pour plus d'information sur les Ruches Horizontales à
Barrettes Supérieures

www.Bee-Mindful.com/plans

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INTERNAL VOLUME CALCULATIONS FOR THE SINGLE HIVE

- Surface of blue trapezoid = height x (short base + long base) / 2
= 7.16in x (9.25in + 17.5in) / 2
= 95.765in²
- Volume V = surface of trapezoid * internal length of cavity (for **48"** long hives)
= 95.765in² * **45in** = 4,309in³
= **19 gallons or 71 litres** (about the volume of a 10F Deep + 10F Medium)

or about 9.5 gallons each cavity for the double hive, close to the preferred volume for colonies of 10 gallons according to Dr. Seeley's research

Important Considerations:

- The internal volume of the hive will vary in function of its length.
- **To make Top-Bar Hive NUCs**, follow the same instructions but use 1" lumber for lighter weight and shorter hive length (we like our NUCs to be long enough to hold about 9-10 bars so they can overwinter in them if need be and don't run out of space too quickly, but they could be longer/shorter based on your specific needs.
- **To build Queen castles** and/or multiple cavity Top-Bar Hives, simply add additional partitions and entrances for each - we run double or triple (sometimes quadruple) Top-Bar Hives for Ag Exemption services
- We recommend making Top Bars 20in long so you have about 1.25in overhang on each side

go to https://en.wikipedia.org/wiki/Langstroth_hive for Langstroth Hive dimensions and volumes

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Hinged Roof, Entrances and "Under-Legs"

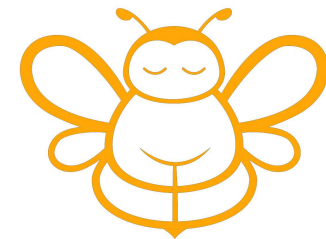


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Hinged Roof Pictures for Inspiration



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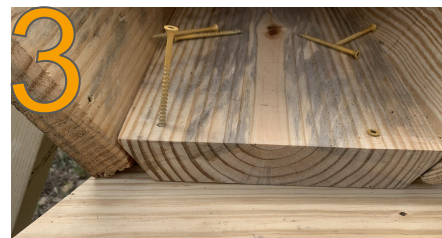
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ADDITIONAL SUGGESTIONS:

Easy Peasy Lang NUC-to-Top-Bar Hive ADAPTER[©]

- Anyone who now wants to convert a Langstroth to a Top-Bar Hive may do so with this easy method, as long as the legs or stands (cinder blocks for example) are under the hive, and there is a nectar flow for build-up...
- Cardboard or Corrugated NUCs are easy to work with, but you could also do that with wooden nucs or even full boxes
- Langstroth frames are pushed flush against the end of the top bar hive so bee space is respected - brood closest to the connection and food furthest away (barrier to expansion).
- Once they have moved brood to the new combs in the TBH (you may cut a plastic queen excluder to fit in-between to speed up the process) and they have enough resources, you can remove the Langstroth nuc and frames, screw the hive end back on, and voila!!



- 1 - Unscrew the end piece
- 2,3 - Use the end piece as a shelf, screwing it in place
- 4,5 - Put the Lang NUC on the shelf, flush with the TBH
- 6 - Open the Lang NUC to the shape of the TBH
- 7 - Push the **brood** Lang frames flush with the TBH
- 8 - Place the top-bars on the TBH, use tape if needed
- 9 - Add the TBH rain cover (this is a double Lang conversion using a double TBH))



EASY-PEASY VERTICAL TO HORIZONTAL CONVERSION



1



2



3



4



5

1 – Attach solid bottom to Lang (no entrance to the Lang)

2 – Align it to the center and top of the Horizontal Top-Bar Hive with end cap removed

3 – Trace and cut out the shape of the TBH cavity onto the Lang outer wall then attach the box with screw to the TBH (add a stand underneath if colony is heavy)

4 – Transfer Lang frames (and supers) with brood tight against the TBH opening and food at the opposite

5 – Add supers if any, and close lid at edge of the lang and add bars to close the TBH



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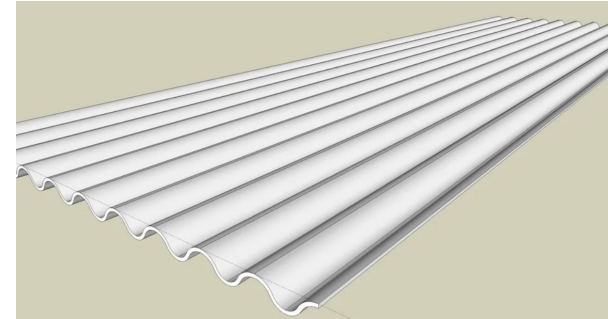
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**This hive requires a rain cover,
such as corrugated metal**