Turning your beekeeping hobby into a business

The basics of building a bee business
12 helpful questions

<table>
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<th>First steps</th>
<th>Making a business plan</th>
<th>Preparing for the unexpected</th>
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<tr>
<td>1. Do I want beekeeping to be a business?</td>
<td>5. Operations: How will I make my product(s)?</td>
<td>9. What help will I need to succeed?</td>
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<td>2. What do I need to get from this business?</td>
<td>6. Finance: How will I turn a profit?</td>
<td>10. Can my business adapt to changes?</td>
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<td>7. Marketing: How will I sell my products?</td>
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First steps
Exploring your options
1. Do I want beekeeping to be a business?

<table>
<thead>
<tr>
<th>HOBBY</th>
<th>BUSINESS</th>
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<tr>
<td>• Pleasure first</td>
<td>• Profit first</td>
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<tr>
<td>• Manage apiaries</td>
<td>• Manage organizational systems</td>
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<tr>
<td>• Focus on the product</td>
<td>• Focus on the customer</td>
</tr>
<tr>
<td>• Mind in the present</td>
<td>• Mind in the future</td>
</tr>
<tr>
<td>• Care for the physical health of your bees</td>
<td>• Care for the financial health of your business</td>
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Cornell CALS College of Agriculture and Life Sciences

First steps

Making a plan

The unexpected
# Small Business Pros & Cons

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<th>PROS</th>
<th>CONS</th>
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<tbody>
<tr>
<td>- Passion</td>
<td>- Risk</td>
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<tr>
<td>- Autonomy</td>
<td>- Commitment</td>
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<td>- Control</td>
<td>- Instability</td>
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<td>- Job security</td>
<td>- Responsibility</td>
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<tr>
<td>- Creativity</td>
<td>- Stress</td>
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<td>- Discovery</td>
<td>- Minutiae</td>
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<td>- Influence</td>
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<td>- Relationships</td>
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<td>- Community</td>
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First steps
- Making a plan
- The unexpected
2. What do you need from the business?

Financial needs

• How much do you need to earn to meet your (and your family’s) needs?
• …to meet those needs and save for the future?
• How quickly do you need to hit that target?

Personal needs

• How much time do you want to devote to the business?
• What makes it worthwhile?

Photos by Dan Love and Anna Dem (Creative Commons license)
3. Who are my customers?

The entrepreneurial model:
A model of a business that fulfills the perceived **needs** of a specific segment of **consumers** in an **innovative** way.

Useful questions to ask:
- Why do people buy honey?
- Who buys honey?
- Where/how do they buy?
- What products do they buy?
- Why do people NOT buy honey?
4. What sets my business apart?

In my market, I offer unique:
4. What sets my business apart?

In my market, I offer unique **PRODUCTS**

- Special honey varietals
- Comb or raw honey
- Pollen (sold direct to consumers or to a processor)
- Propolis
- Value-added products (candles, soaps, candies, moisturizer, infused honey, propolis tinctures, etc.)
4. What sets my business apart?

*In my market, I have unique **APPEAL***

- “Buy local” premium
- NYS or other certification on label
- Access to farm markets, specialty stores closed to large or non-local producers
- Appeal to institutional customers (restaurants, breweries, bakeries, colleges)
4. What sets my business apart?

In my market, I offer unique **SERVICES**

- **Pollination**
- Queens or nucs with desired traits
- Extraction, bottling, or wax processing for smaller producers
- Cut-outs
- Custom equipment
- Classes and consulting
4. What sets my business apart?

In my market, I offer unique VALUE

- Know your competition
- Tough for a small producer to compete in the bulk honey market
- May be best value for local or specialty goods
- If prices seem high, be sure you know why!
Making a business plan

A blueprint for success
The business planning process is more useful than the document.

“No plan survives first contact with customers.”  
– Steve Blank
5. Operations: How will I make my product(s)?

Walk through the process needed to create your actual product from beginning to end, taking note of the resources needed for each step.

- Queens & colonies
- Apiary supplies
- Equipment
- Land & Facilities
- Time
- Skills
- Knowledge
- Employees
Example: meet Johnny Fictitious

- Schoolteacher; paints houses in the summer
- Hopes to get enough income from beekeeping to give up house painting, spend summers at home with the kids
- Expects to expand from 10 hives to 50 by summer 2022
- Plans to produce honey and wax products
- Some pollination services
## Example: Johnny’s operational plan

<table>
<thead>
<tr>
<th>Expansion to 50 colonies</th>
<th>Purchasing 20 nucs in 2019, rest of growth with splits</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Expects 30% annual loss</td>
</tr>
<tr>
<td>Land &amp; Facilities</td>
<td>Verbal agreement from two friends to place colonies in their orchards</td>
</tr>
<tr>
<td></td>
<td>Owns a rural property with plenty of good forage</td>
</tr>
<tr>
<td>Equipment</td>
<td>Plans to use part of an existing pole barn as a honey house</td>
</tr>
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<td></td>
<td>Plans to purchase used extractor, uncapper, heated bottling tank, printer</td>
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<tr>
<td>Apiary supplies</td>
<td>Expects to get better bulk price for certain supplies (feed, jars, foundation)</td>
</tr>
<tr>
<td></td>
<td>Other variable costs will rise with expansion (transportation, marketing)</td>
</tr>
<tr>
<td>Time &amp; Employees</td>
<td>Hopes to do as much sales and maintenance work as possible over the summer</td>
</tr>
<tr>
<td></td>
<td>Will pay a neighbor to help with extraction and bottling</td>
</tr>
<tr>
<td>Skills &amp; Knowledge</td>
<td>Finished a master beekeeper course</td>
</tr>
<tr>
<td></td>
<td>Counting on advice from friends in regional beekeeping club</td>
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**Skills & Knowledge**
- Counting on advice from friends in regional beekeeping club

**Time & Employees**
- Hopes to do as much sales and maintenance work as possible over the summer
- Will pay a neighbor to help with extraction and bottling

**Equipment**
- Plans to purchase used extractor, uncapper, heated bottling tank, printer
- Plans to use part of an existing pole barn as a honey house

**Apiary supplies**
- Expects to get better bulk price for certain supplies (feed, jars, foundation)
- Other variable costs will rise with expansion (transportation, marketing)

**Land & Facilities**
- Verbal agreement from two friends to place colonies in their orchards
- Owns a rural property with plenty of good forage

**Expansion to 50 colonies**
- Purchasing 20 nucs in 2019, rest of growth with splits
- Expects 30% annual loss
6. Finance: How will I turn a profit?

Total value of production - Total cost of production = Farm profit
Costs of production, obvious and not

• **Fixed (overhead) costs**
  - Costs that remain stable regardless of production
  - License and registration fees, insurance, interest payments, utilities, repairs and maintenance, etc.

• **Variable costs**
  - Costs that increase with production
  - Feed, medicine, bees, transportation, labor

• **Depreciation of capital goods**
  - In principle: purchase price / expected lifespan
  - Convention is 7 years for equipment; 5 years for vehicles

• **Unpaid labor**
  - Your time is valuable!
## Results from first benchmarks study

### Table 9. Costs of Production ($/colony)

<table>
<thead>
<tr>
<th>Measurement (7 observations)</th>
<th>Range</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Variable (direct) costs</td>
<td>$41</td>
<td>$627</td>
</tr>
<tr>
<td>Fixed (overhead) costs</td>
<td>$16</td>
<td>$434</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>$23</td>
<td>$232</td>
</tr>
<tr>
<td>Unpaid operator &amp; family labor</td>
<td>$123</td>
<td>$1,640</td>
</tr>
<tr>
<td>COP from Operations</td>
<td>$61</td>
<td>$1,043</td>
</tr>
<tr>
<td>COP with Depreciation</td>
<td>$94</td>
<td>$1,066</td>
</tr>
<tr>
<td>Full Economic COP</td>
<td>$217</td>
<td>$2,706</td>
</tr>
</tbody>
</table>

### Table 10. Costs of Production ($/lb)

<table>
<thead>
<tr>
<th>Measurement (7 observations)</th>
<th>Range</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Variable (direct) costs</td>
<td>$0.57</td>
<td>$10.11</td>
</tr>
<tr>
<td>Fixed (overhead) costs</td>
<td>$0.24</td>
<td>$7.01</td>
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<tr>
<td>Depreciation expense</td>
<td>$0.23</td>
<td>$2.35</td>
</tr>
<tr>
<td>Unpaid operator &amp; family labor</td>
<td>$1.59</td>
<td>$36.84</td>
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<tr>
<td>COP from Operations</td>
<td>$1.14</td>
<td>$16.82</td>
</tr>
<tr>
<td>COP with Depreciation</td>
<td>$1.37</td>
<td>$17.19</td>
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<tr>
<td>Full Economic COP</td>
<td>$2.97</td>
<td>$43.64</td>
</tr>
</tbody>
</table>
A helpful tool!

Source: https://pollinator.cals.cornell.edu/resources/business-resources
Example: Back to Johnny

- **GOAL:** $10,000 in gross income, $2,000 in pre-tax profit
- Johnny expects to produce 50 pounds of honey per colony, earn $6 per pound from sales
- 50 colonies x 50 pounds x $6 per pound = $15,000
  - Piece of cake, right?
- Expects to earn another $500 from candles
- Pollination services: $30 per colony x 12 = $360
  - On the low side for commercial pollinators
- So, all told, Johnny expects to earn $15,860 from his apiary.
  - Definitely meets the gross income goal, but what about profit?
Example: using median values

• Fixed costs: $61 \times 50 = $3,050
• Variable costs: $190 \times 50 = $9,500
• Depreciation: $33 \times 50 = $1,650

$15,860 - $14,200 = $1,660 \text{ profit} \ldots \text{before considering unpaid labor.}$

If Johnny puts in 1,040 hours of beekeeping work over the year (a half-time job), he’s making $1.60 per hour.

• Could still be worth it, but he should know what he’s getting into!
A note on taxes

• You’ll need to track income and expenses

• **Income tax** on profit (IRS Schedule F)

• **Self-employment tax** (15.3% of profit)

• Collect and remit **state sales tax** on taxable items
  • Pure honey, comb honey & creamed honey are exempt
  • Beeswax and candy/confections are subject to NYS sales tax
  • Don’t apply to collect sales tax unless you know you need it!

• **Property tax**: agricultural assessment could be a major benefit, even if you rent land (up to 10 acres)
Agricultural Assessment

Property taxes based on agricultural use value rather than market (resale) value.

Land used for an apiary can qualify if in agricultural use for last 2 years and:

a) At least 7 acres & $10,000 annual agricultural income, or

b) Greater than $50,000 annual agricultural income.

Can enroll up to 10 acres on basis of apiary production.
7. Marketing: How will I sell my products?

What sets your product apart?

- Lots of outlets, but it’s a crowded market
  - *Can you use that to your advantage?*
- Using your expertise and connections
  - *You’re more of an operator than you think*
- Developing a pitch
  - *What can you do for the outlet?*
- Finding the right price
  - Bee Culture regional price report
  - There are no typical producers
# Bee Culture Regional Honey Price Report

## Reporting Regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Extracted Honey Prices</th>
<th>Wholesalers</th>
<th>Retail Shelf Prices</th>
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### History

<table>
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<tr>
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<th>Last Month</th>
<th>Last Year</th>
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### Summary

<table>
<thead>
<tr>
<th>Region</th>
<th>Reporting</th>
<th>Extracted Honey Prices</th>
<th>Wholesalers</th>
<th>Retail Shelf Prices</th>
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**First steps**

- **Making a plan**
- **The unexpected**
NYS 2017 Honey Prices by Operation Scale

<table>
<thead>
<tr>
<th>Operation Scale</th>
<th>Average price per pound</th>
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</thead>
<tbody>
<tr>
<td>Hobbyist (1-49 colonies)</td>
<td>$7.65</td>
</tr>
<tr>
<td>Sideliner (50 - 499 colonies)</td>
<td>$5.59</td>
</tr>
<tr>
<td>Commercial (500+ colonies)</td>
<td>$3.28</td>
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</tbody>
</table>

Source: 2017 NYS Beekeeper Tech Team Report (pollinator.cals.cornell.edu)
Example: finishing up with Johnny F.

Needs to sell 2,500 pounds of honey:

1. Front-yard farmstand: 100 pounds, based on previous years;

2. Farm markets: 800 pounds at best one; 600 at second-best; 400 at third, based on conversations with others and visits to the markets;

3. Expects to sell 100 pounds to two local restaurants;

4. Plans to sell remaining 500 pounds through local retailers, and has developed a list of prospects.
A couple of notes on labeling:

**Required on all labels:**
1. The word “honey,” prominently displayed
2. Business name
3. Address
4. Net weight

**Can use NYS labelling if:**
- 100% harvested in NYS,
- You pass a food safety exam, and
- You submit honey bee health information.

*Program info at certified.ny.gov*
There are many venues that you can use to sell your farm products. This exercise will help you to understand your marketing options, what is required for participation in each of these channels and how each would fit within your farm operation, as well as farm and personal goals.

1. What's the diversity and scale of production on your farm and how does that compare to the size of potential markets you could, or would like to serve? For the products you produce, does the quantity produced lend itself to Direct or Wholesale channels?

<table>
<thead>
<tr>
<th>Product</th>
<th>Annual Production</th>
<th>Wholesale or Direct?</th>
<th>Potential Market Size</th>
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2. Location - Location - Location
   a. What types of customers are around you? Write a generalization of your local population. Is your farm or market area visible to this population?


8. Does my business plan make sense?

For most entrepreneurs, developing a business plan is a process of revision.

The plan is only as good as its assumptions; real-world fact-checking is important.

It won’t go as planned!
Preparing for the unexpected

Your bee plan’s plan B
9. What help do I need to succeed?

May need help with:

• Acquiring particular knowledge or skills,
• Recurring apiary or business tasks,
• Identifying or fixing crises,
• Filling orders when production falls short.

Useful to identify in advance
# Self-Assessment

<table>
<thead>
<tr>
<th>Competency</th>
<th>Excellent</th>
<th>Good</th>
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<th>Non-existent</th>
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**First steps**  
**Making a plan**  
**The unexpected**
Colony losses in 1914-15

...and 2016-17

Identifying risks

“Stress test” your business plan

What will I do if:

• My honey sells for $5 per pound instead of $6?
• Sales at the farm market are 25% less than expected?
• I produce 40 pounds of honey per colony instead of 50?
• My customers ordered 40 nucs, but only 35 survived the winter?
• I need to work more hours at my other job?
Don’t Panic!

You can answer those questions!

- Identifying practical steps in advance can save stress later on
- The future may be unpredictable, but it’s not unmanageable
- Great way to identify key points of the business model
  - Distinguish between problems that are inconvenient, those that require changes to your business, and those that make the business untenable
11. When will I know if it’s working?

- It can be difficult to distinguish between normal startup pains and problems with the business model
- Greater personal investment leads to greater personal attachment
  - Also known as escalation of commitment, loss aversion, tunnel vision, the sunk cost fallacy, or good old stubbornness
- **Fail well**
  - It is very rare for everything to go according to plan for a new business
  - Recognizing problems quickly reduces risk, gives you a chance to adjust, keeps you in control
Failing well

• Set "trip wires" in advance.
• Check in with your business plan.
• Compare your business to others.
• Think like an investor.
• Don't go it alone.
• Remember: this is a means to an end.
12. Do I want beekeeping to be a business?
Resources

Travis Grout, NYS Beekeeper Tech Team

Email: travis.grout@cornell.edu

Cornell Pollinator Network
A wealth of information for beekeepers, including business resources
Main page: pollinator.cals.cornell.edu
Updates and events: www.facebook.com/DyceLab/

Cornell Small Farms Program
Guide to Farming in NY
smallfarms.cornell.edu/resources