



Making, Selling, Wintering Nucs

Benjamin Cornect



Making Nucs

What is a Nuc?

Why I sell so many Nucs.

How do you make them?



What is a Nuc?

Nucleus Colony

- 4 frames of bees (both sides)
- 2 full frames of brood
- 1 frame feed
- 1 mixed frame larvae, pollen, open space for queen to lay
- New mated queen



Brood and Bees

- Minimum 2 full capped frames brood, no eggs from donor/parent hive
- Each frame covered completely both sides with capped brood
- 1 frame equals 2 frames of bees when they emerge
- Must have enough bees covering all 4 frames to keep brood warm and support colony as it grows
- Placed in centre of nuc for protection



Feed, Pollen & Open Space

- 1 frame capped/cured feed and 1 frame mixed pollen/larvae-capped brood/open space
- Feed equals Bees
- Provides feed for both bees and brood, prevents limiting of nuc growth by the bees
- Food source until nucs are sold and in-case of poor foraging weather in May
- Ease of queen checking, limited area to start laying



Mated queen

- Newly mated queen from current year (import)
 - Saskatraz Hybrid
 - Purebred Buckfast
- Alternative options
 - Kona
 - California
 - Chilean
 - Australian
 - New Zealand
- Local
 - Not possible to raise local queens for May
 - Would have to use stock overwintered from previous year



Why do I sell Nucs?

- Additional revenue stream
 - Offsets cost of queens for operation
 - Sell 25 Nucs, pay for 100 queens
 - Pays for Spring feed, pollen & meds
- Complementary product to hive equipment sales
 - One stop shop for bees and equipment
- Brood comb replacement
 - 20-25% replacement per Nuc made
- Paid swarm control prior to pollination
- Limit Hive numbers



Free Queens

\$185 4 Frame Nuc Sale

\$42 Nuc Queen

\$143: 4 New Replacement
Frames, Cardboard Nuc Box, 3
Queens for me & Coffee money



Brood Comb Replacement (Spring)

19 Brood Frames + 1
Frame Feeder

4 New Undrawn
frames from making a
Nuc + 1 Undrawn to
replace Frame Feeder

25% Comb replaced in
Spring



Start Early.



Feed equals bees

- Stimulate brood production as early as possible; pollen sub, syrup
- Spring Miticide
- Centre clusters, alleviate honey bound colonies
- Build surplus bees

Grading Hives

- Grade and mark hives end of April for Nucs or Take-away Splits
- Saves time when queens arrive
- All Nucs can be made in 1 or 2 days

Simplify the process

- Have equipment ready to go to make all Nucs in 1 or two days
- Easier queen installs and checks
- All Nucs ready for sale at same time
- Makes sales and inspections less of a time sink

Plan ahead.

- Order a few extra queens for do-overs
- Book Inspections early
 - Book late April or early May
 - Schedule for 9-10 days after queens are due to land
- Have multiple contact info for customers and give them lots of notice
- Have a cancellation list



Consolidation saves time and labour.

- Large holding yards cut down on time/labour needed to install, queen check and feed Nucs.
- Easier to equalize if drifting occurs.
- Easier to send customers/inspectors to known address/civic # vs random fields in middle of nowhere.
- Schedule pickups at same time.



Installing Queens

- Install Queen (no attendants)
- Spritz bees and cage
- Feed ½ gal. light syrup

- Queen check 4 days later
- Release if still in cage (not balling)
- Recheck in 3-4 days



Selling Nucs

Inspections, paperwork & requirements for selling out of province.

Packing and shipping nucs.

Mentoring, education and repeat customers.



Inspections

- Required for all bees and or used hive equipment to be sold (The Bee Industry Act)
- Paperwork (sales within NS)
 - BK# of purchaser
 - Inspection certificate
 - No real strict limit on time between inspection and sale
- Paperwork (sales outside NS)
 - Signed document stating treatment Tracheal mites past 8-10 months (Formic Acid)
 - Inspection certificate, sometime Jason gives you stickers
 - Time limit between Inspection and sale (SHB)
 - Purchaser must advise their Prov. Inspector of incoming bees



Inspections (cont.)

- You don't have to be there for inspection.
- If full production hives in yard they will inspect those too.
- Remember to Post your BK #
- Provincial Inspector;
 - Jason Sproule
 - Angela Gourd
 - Adam Wile
- Brood Diseases
 - Major: AFB & EFB
 - Minor: Sac & Chalkbrood
- Small Hive Beetle
- Signs of Mite Infestation
- Queen Status/checks

INSPECTION REPORT #: 2018-021		Inspector(s) Names: Angela Gourd and Adam Wile		Telephone Number(s): 902 956 0981 902 863 7500		Date of Inspection (mm/dd/yy) 05/24/2018						
Beekeeper Information:												
First Name: Benjamin		Surname: Cornect		BK Code:		Company Name:						
Telephone No.: 902 970 3491		Alternate Tel. No.:		Fax:		Email: benjamincornect@gmail.com						
Beyard Name/#: Homeyard		Yard Status: Active		Beekeeper Present for inspection: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Landowner Information (if applicable):												
First Name:		Initial:		Surname:		Telephone Number:						
Beyard Information:												
Street Address: 365 Cornect Rd						Municipality: Guysborough						
Province:		Postal Code:		County:		Township: Denver						
Hives Counted in Yard: 0 Live:				Dead: 0		Nucs Counted in yard: 35						
Hive	Live or Dead	AFB Positive	EFB Positive	Sac Brood	Chalk Brood	SHB	Dysentery	Wax moth	Varroa Level	Other Pests	Queen Status	Sample Taken
1	L								/300		1	<input type="checkbox"/>
2	L								/300		1	<input type="checkbox"/>
3	L								/300		1	<input type="checkbox"/>
4	L								/300		-	<input type="checkbox"/>
5	L								/300		-	<input type="checkbox"/>
6	L								/300		1	<input type="checkbox"/>
7	L								/300		1	<input type="checkbox"/>
8	L								/300		1	<input type="checkbox"/>
9	L								/300		1	<input type="checkbox"/>
10	L								/300		1	<input type="checkbox"/>
Health Remarks: Populus nucs.												

These bees are approved for sale: Yes No



 Inspector / Provincial Apiculturist

This inspection was authorized by the Provincial Apiculturist of Nova Scotia, in accordance with Bill No. 173 The Bee Industry Act and Section 17 Regulations. This certificate is valid for a period of no longer than 6 months past the date of inspection. Sale of bees or bee equipment past 6 months will require additional inspection. This inspection does not guarantee freedom from disease but only whether visible signs of disease were detected on the date of inspection.

Questions about this inspection should be directed to the Provincial Apiculturist: Jason Sproule, NSDA; 902-890-1565; Jason.Sproule@novascotia.ca



CSI Truro

Three ways to pack and ship Nucs.

Pine Wooden Nuc boxes (\$\$\$\$\$)

- Screen vent on top, mesh front entrance
- Easy transport, no transferring after inspection
- Higher cost transferred to Nuc price



Coates plywood Nuc boxes (\$\$\$)

- Small Front Entrance need additional vents (overheating)
- Time consuming to make
- Plywood never flat, bowed sides
- Re-usable for customer if painted



Waxed Cardboard (\$)

- Little to no protection from cold May weather, soggy bottoms
- Bees tend to chew escape hatches if confined too long

Corrugated Plastic Nuc Boxes (\$\$)

- Little to no protection from cold, water resistant
- Poor ROI vs Waxed cardboard



Point New Beekeepers in the right direction.

Workshops and classes

- We put on a free day workshop for Nuc customers each year to cover all the Basics
- Paid Classes; Brant's Bees, Country Fields, Modern Beekeeper Course



Mentors

- We continue to mentor any and all beekeepers that call.
- List posted on NSBA website of experienced beekeepers and their area.



Farm Tours & Literary Sources

- Beekeeping Books
- Websites (Scientific Beekeeping - Randy Oliver)
- Bee Journals/Magazines
- Avoid YouTube 90% of the time.



Overwintering Nucs

Everyone Should Make Overwintered Nucs.

How and When to Make Them.

Winter Prepping, Spring Management.



Why even more Nucs?

- Winter Insurance
 - Make up potential losses
- Expansion/Increase Hive numbers
- Easier to Overwinter the full Production Hives
- Weaker Nucs can be used to requeen production colonies early Spring
- Additional Honey production
- Brood Comb replacement
 - 50% in Overwintered Nuc
 - 20% in donor Hive
- Swarm Control
- Increased Nuc production each year
 - Less Splits more Nucs



Overwintered Nucs

- 5 over 5 configuration
 - 9 Frames + Frame feeder
- Vertical Single
- Cheap, low input costs
 - Queen, 3 gal. Syrup & 9 New Frames
- Easier to Overwinter then full Production Hives
- Overwintered in 8-way pods
- Higher survival (communal heat)
- Extra Foragers for installed Queen
- Extra Nurse Bees for Self-raised Queen



Equipment

- Needed to make each Nuc:
 - 2x 5 Frame nuc boxes
 - Nuc bottom, Inner and Outer Cover
 - 9 Undrawn Frames
 - 4 for donor/Production Hive
 - 5 for Overwintered Nuc
 - Frame Feeder



Queen vs Queenless Overwintered Nucs

Installed Queen

- Faster Growth
- Low risk of wasting resources
- Usually produces 5 frame medium of honey
- Require less feed and management
- Usually self-sufficient by end of July
- Select Genetics vs Mut Queens

Raise their own Queen

- Brood break till queen is raised, OA Vapor chance
- Higher risk of wasting resources, failed/improper mating
- Requires more feed to build up winter stores and push bees through August dearth
- Requires more management
- Savings on queen purchase outweighed by feed costs

Regular vs Tear Down Nucs

Regular Overwintered Nucs

- Surplus brood taken from full Production Hives in July
- Unlimited Broodchamber: resources taken from Third Deep
- Swarm Prevention
- Harvest Swarm Cells for Queenless Nucs
- Inspect/Queencheck only Frames I take (highly optional)

Tear Down Nucs

- Weak Hives early Spring dropped down to singles to be broken into Nucs in July
- Eliminate poor Genetics from Operation, sacrificing honey for bees
- Swarmed Hives or Hopeless Hives broken down into resources
- Kill old Queen or run her as her own Nuc

Timing

- 7th to 14th July for mated queens
 - Make same as Spring Nuc but with extra Foragers
- Middle to late June if raising their own queens
 - Make with extra capped brood and Nurse Bees
 - At least one frame side with fresh eggs



Initial Management

- Fed when queen installed, again when queen checked and when top supered
- Top supered week to 10 days after queen installed
 - Top supered with undrawn comb
 - Used to slow growth/ swarming pressure
- Equalize weaker Nucs within yard usually 4-5 weeks after being made
- Swap positions to boost forager populations



Late Summer Management

- Medium 5 frame Honey Super to keep brood nest open
- Low swarming tendencies
- Use more Undrawn Comb to slow prolific layers down
- Try to keep Frame Feeder clear of comb
- Heft any Nucs without Honey supers for feed.



Fall Management

- Pull Honey Supers of Overwintered Nucs
- Heft for final weight/last chance to top up stores
- Late September/Early October
- Move Overwintered Nucs from Out-yards to Production yards in 8-way pods
- 8-16 Overwintered Nucs per Production yard
- Install Centre and top 1inch foam insulation





Winter is Coming



Materials

- Blue Hardwood Pallet (any solid pallet really)
- Common Cover for 8-way pod
- Approx. 1 & ½ Sheets 1in Trufoam (30\$)
- Nuc entrance reducers
- Black Stretch Film



Advantages of Double Nucs/8 Packs

- Strongest Nucs in corners, weaker Nucs in centre 4 spots
- Larger shared surface area
 - Conserve energy, reduced consumption of stores
 - Colonies form one large 8 colony cluster
- Weaker colonies able to raise more brood than normal
 - Higher Spring Turn-over
- Re-using equipment from Spring Nucs



Winter Wrap



Winter Wrap



Spring Management

- Leave Wrapped till early/mid-May, no longer than that.
- Weaker units (queen and handful of bees) can be pulled and used to requeen production hives
- At a slight disadvantage can only work top box for inspections
- Equalize feed between Nucs, some will be honey-bound
- Feed pollen and syrup same as production Hives
 - Weekly syrup April into May/until Dandelion flow



Transferring to Double Deep

- Early/Mid-May
 - Nucs will be 7-9 Frames Brood
 - 9 Frames + Feeder full of Bees
 - Require weekly feed till established Dandelion flow
- Move OW-Nucs; fill holes in yards or set up new yard.
- Full Nuc in Deep super set on top of sorted Deep super (Heat rises, comb replacement)
- Have to weaken before pollination (partial Nuc from each - swarm prevention)
- Reverse before pollination





Thank You.