Colony Manipulations

Overview

- Comb Change
- Swarm Control Methods
- Moving Colonies

BBKA General Husbandry Tasks

- Demonstrate the inspection of a brood comb for brood diseases.
- Demonstrate the procedures for creating an artificial swarm other than using a nuc.
- Demonstrate preparation of a nucleus colony for the purpose of swarm control, sale, increase or queen mating as advised by the assessors.
- Demonstrate the uniting two colonies and the precautions that need to be taken.
- Demonstrate changing brood frames for disease control using a Shook Swarm technique.
- Demonstrate changing all the brood frames in a strong colony, keeping the existing brood.
- Demonstrate changing brood frames for disease control in a weak colony using a Bailey Frame Change.
- Demonstrate how to prepare a colony for moving to another apiary.

Shook Swarm

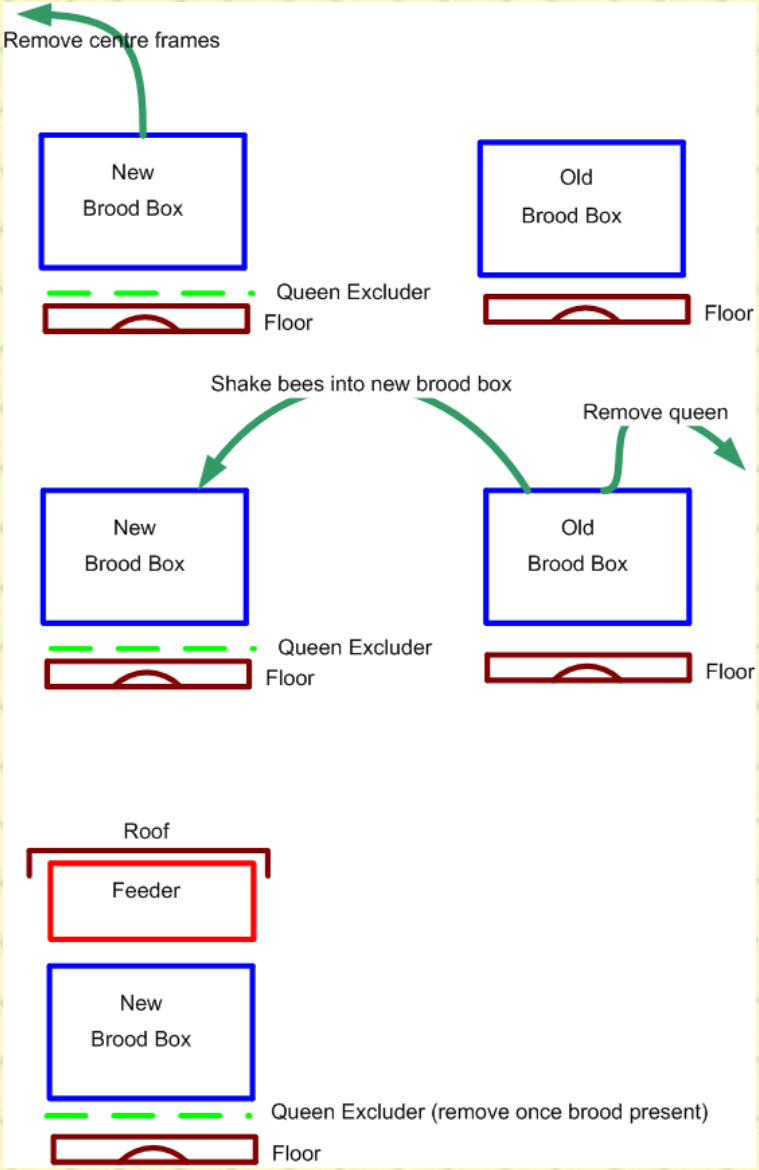
- Shook swarm is a method of rapidly changing comb;
  - Due to disease (Nosema/EFB/Varroa infestation)
  - Annual comb renewal

- Equipment needed
  - Clean brood chamber filled with frames of foundation
  - Clean floor, crown board and queen excluder
  - Rapid feeder and syrup 1kg sugar to 630ml water

- Precautions
  - This method requires a strong colony
  - If colony is small then shake into a Nuc box instead

Shook swarm

- Stage 1
  - Move existing hive to side
  - Place new hive on existing stand, entrance in same place as old
  - Ensure Queen Excluder between floor and brood box
  - Remove middle frames from new hive
- Stage 2
  - Find queen in original box and put her away safe
  - Shake bees from frames into new box, start on outside with older bees
  - Brush/shake bees on woodwork into new hive
  - Place old comb in bag/sealed container for destruction
- Stage 3
  - Replace comb in middle of new hive
  - Run queen into new hive
  - Assemble new hive with feeder set up
  - Remove bottom queen excluder when brood present



Bailey Comb Change

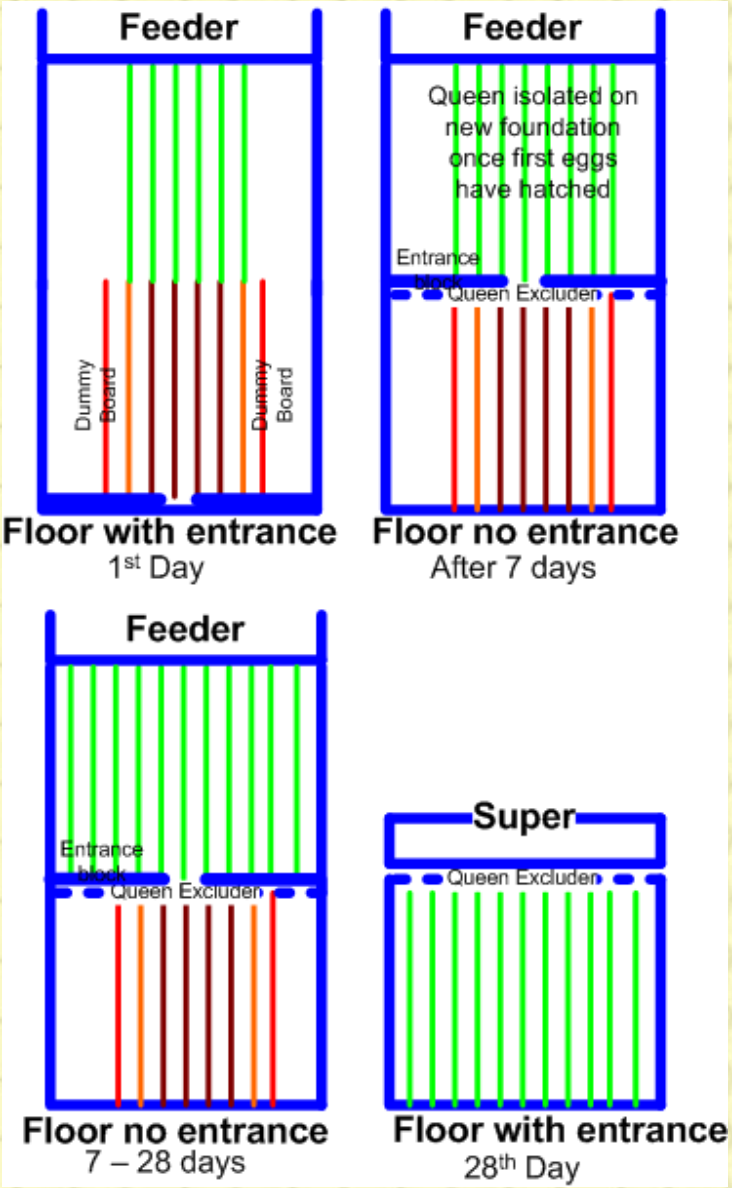
- Method of changing all of the Brood comb in one operation at the beginning of the season rather than swapping out odd combs.

- Equipment needed
  - Clean brood chamber filled with foundation
  - Eke with entrance, queen excluder or Bailey Board
  - Rapid feeder (or contact feeder if cold) and syrup 1:1

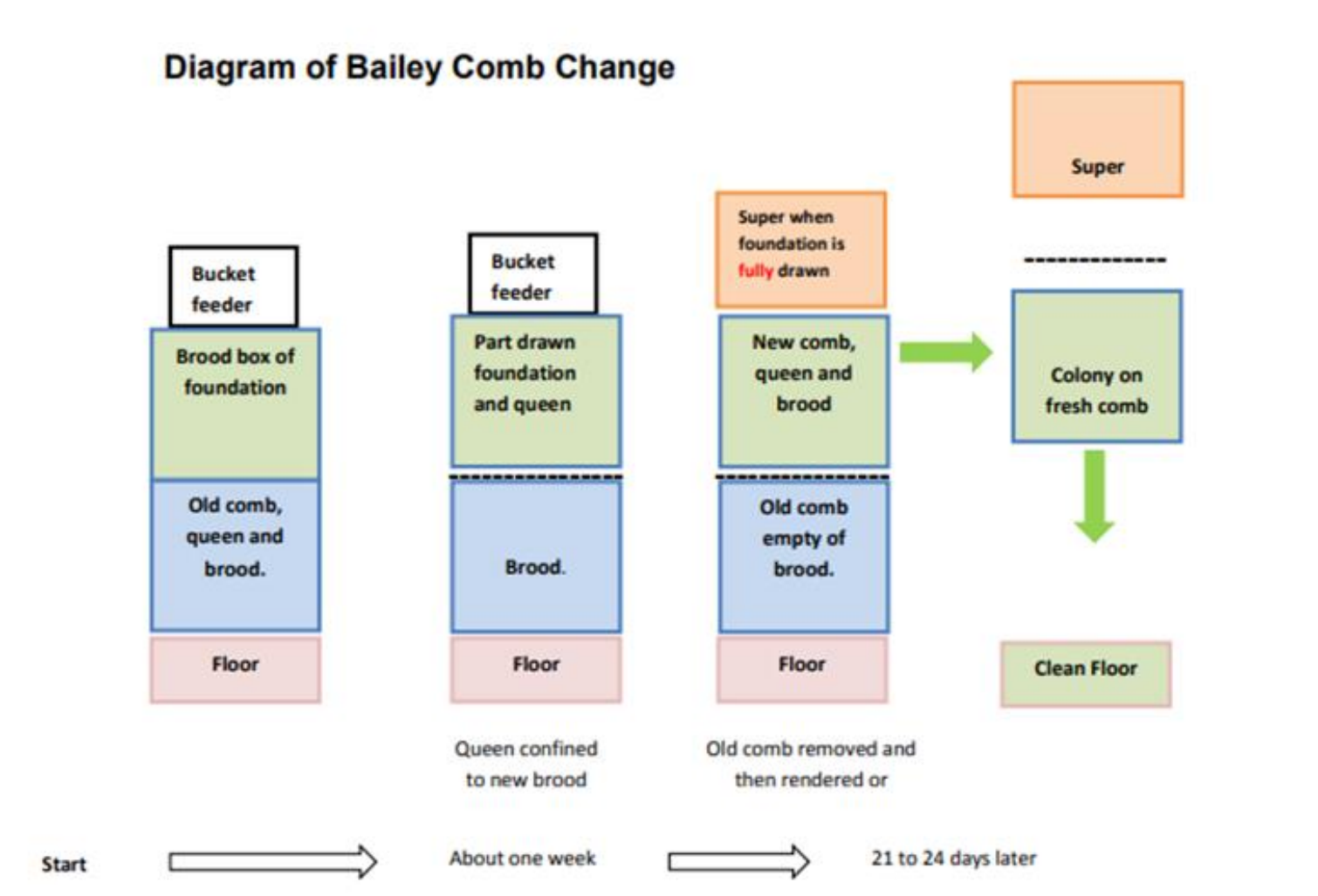
- Precautions
  - Care with timing when moving queen on to new comb to avoid isolation

Bailey Comb Change (Spring)

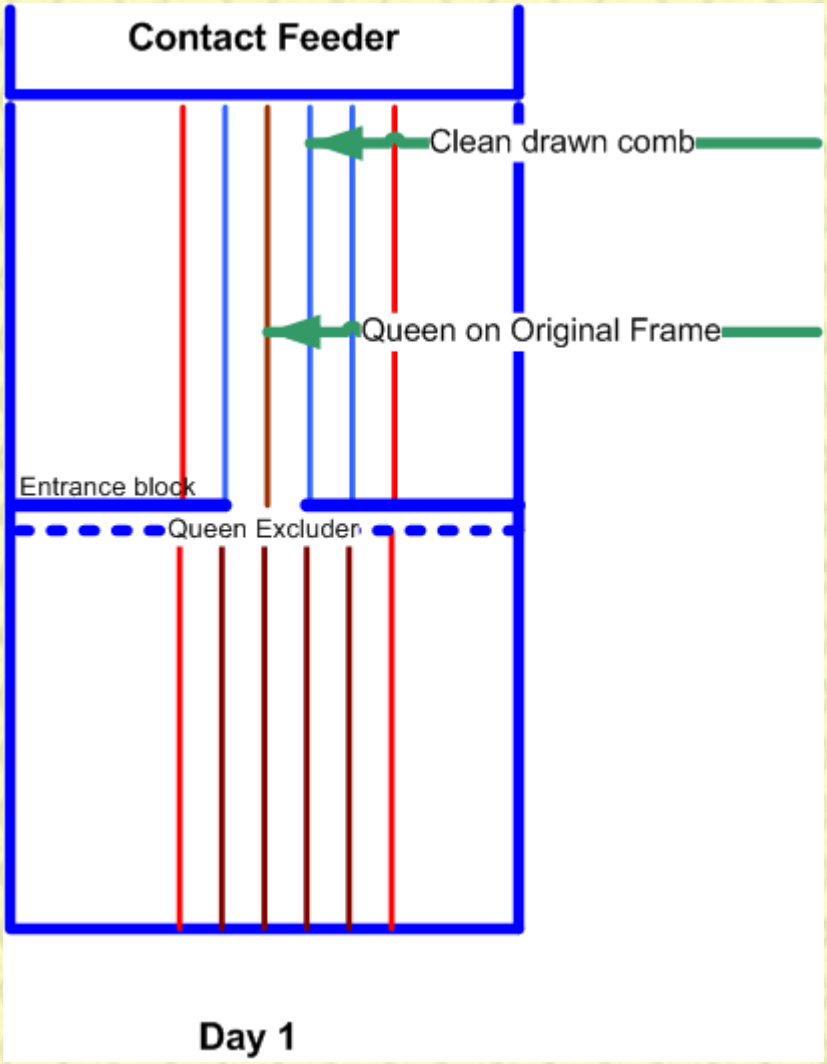
- Step 1
  - Go through colony, remove all comb without brood and replace with dummy boards
  - Place new brood box above existing box with matching number of frames of fresh foundation or clean drawn comb
  - Place feeder with 1:1 syrup above crown board
- Step 2
  - After about 7 days when queen is laying in top box and some eggs hatched
  - Isolate queen on new foundation with Queen Excluder between brood boxes and new entrance above the Queen Excluder
  - Close bottom entrance
- Step3
  - Add frames of fresh foundation as necessary to the top brood box and continue to feed
- Step 4
  - Once all brood has emerged in old brood box remove it and cleanse. Entrance now moved back to bottom.



Bailey Comb Change Strong Colony (Summer)



Bailey variation for weak colony with Nosema

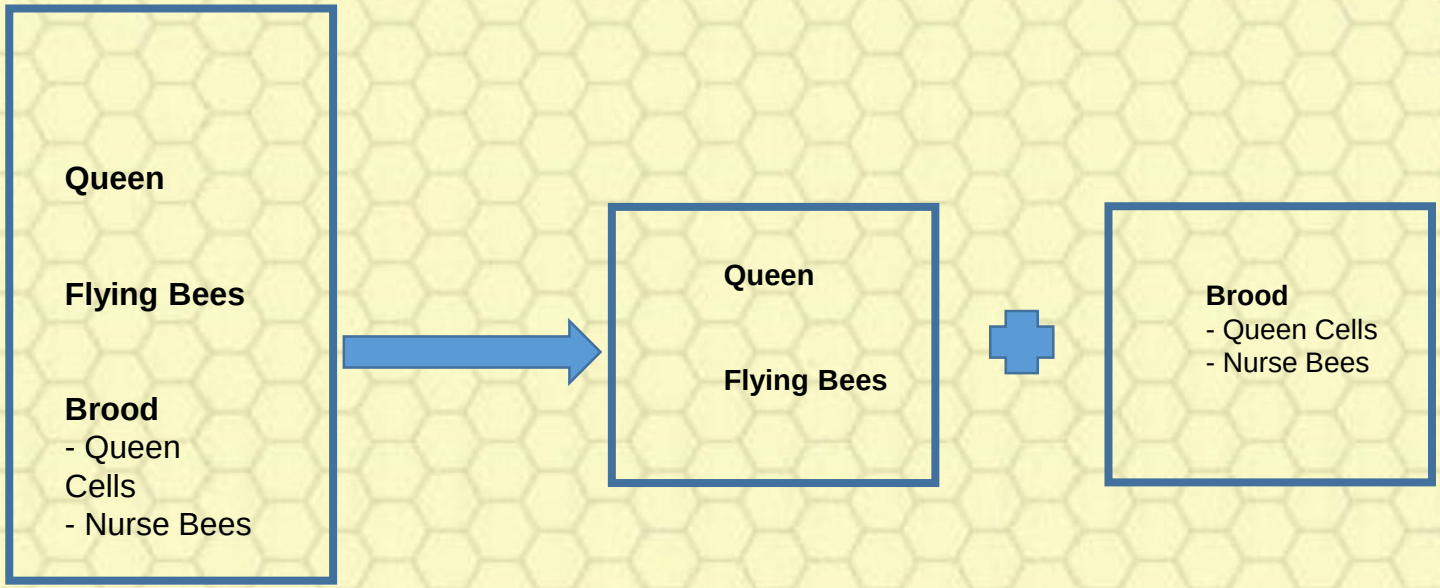


Swarm Control

- Different methods, same principles
  - Separate queen from brood, fool queen/colony to think they have swarmed
  - Fine line between swarm control and queen rearing
- Methods
  - Nucleus, Artificial Swarm, Snelgrove, Horsley, Demaree…

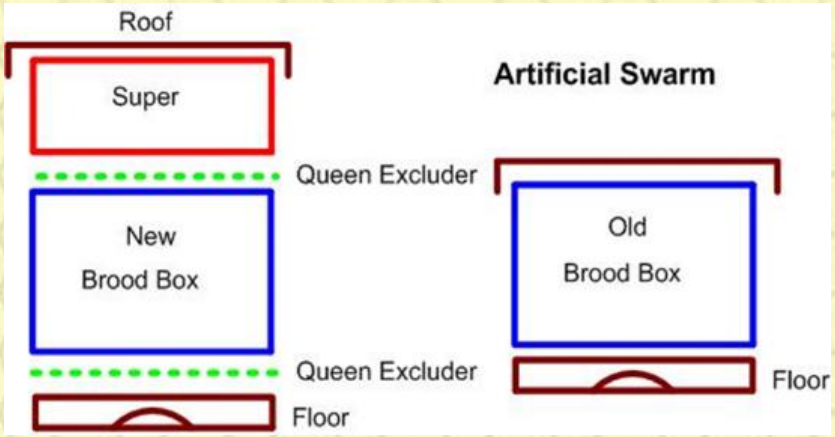
Method	Pro	Con
Nucleus, remove queen and make up nuc	Simple, makes increase, keeps colony intact, insurance with queen	Need to manage queen cells properly
Artificial Swarm, split colony over two hives	Simple to visualise, works	Need extra hardware
Snelgrove/Horsley, crownboard with entrance(s)	Simple, keeps colony honey producing, keeps colony on one stack	Timing is key, ideal for home apiary
Demaree, split colony but keep in one stack	Gives beekeeper time to think, less additional hardware, colony honey producing	Only buys time, need to do something else

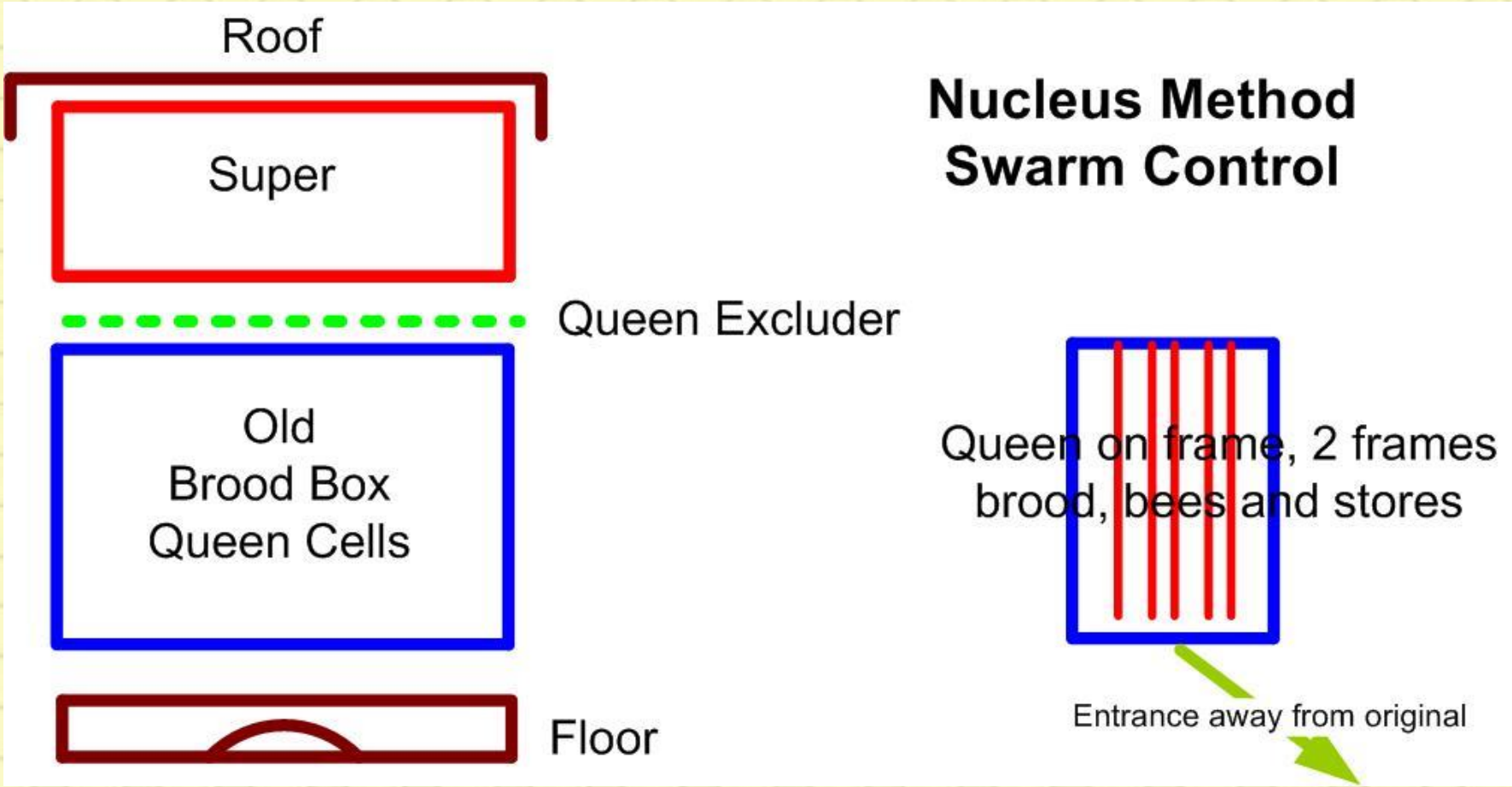
Splitting the colony (Artificial Swarm)

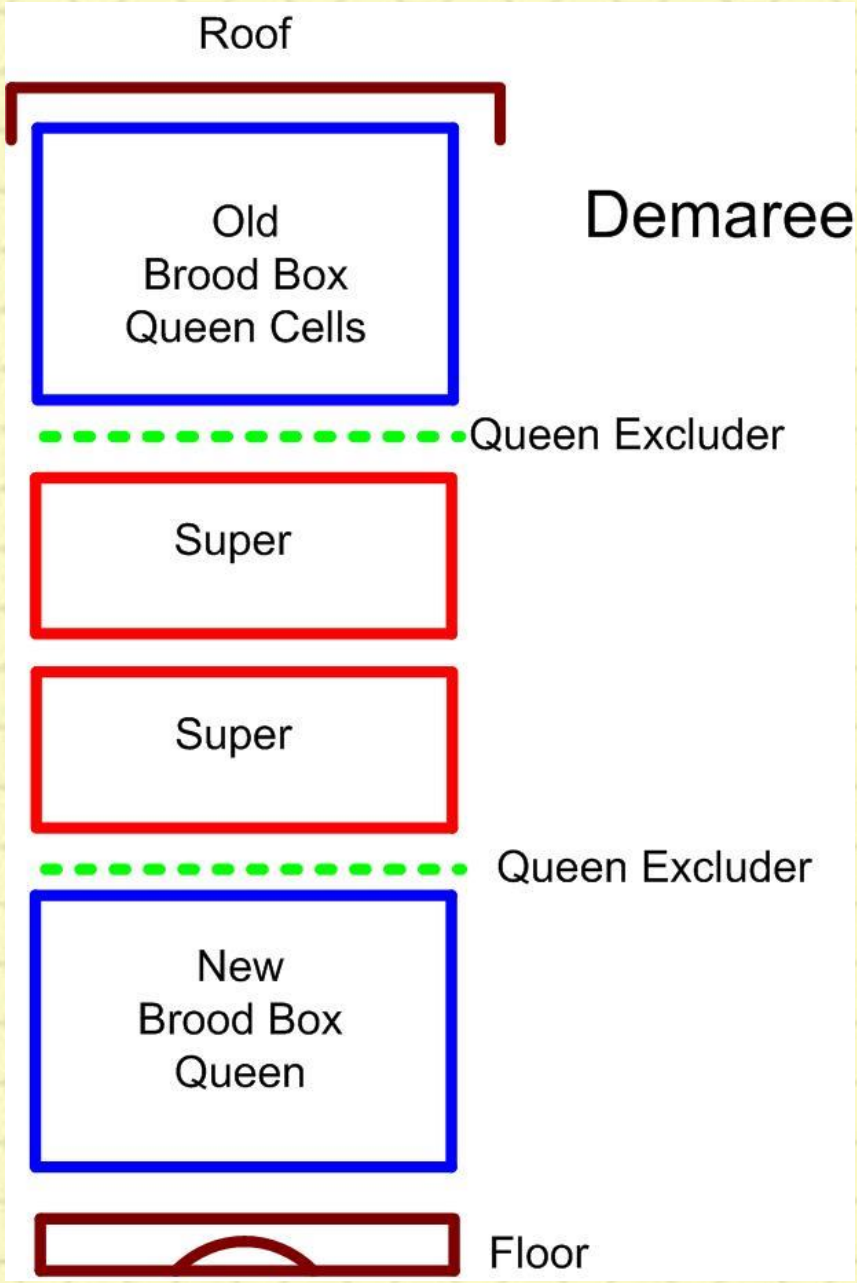


Pagden artificial swarm

- Remove any supers and move the hive to a stand 1 metre away
- On the original site, place a queen excluder above a floor and a new brood box of foundation with space in middle
- Go through the original hive and find the frame with the queen on
  - Carefully remove any queen cells
  - Put the frame with the queen into the centre of the new brood box
- Find a frame with no queen cells and open brood
  - shake the bees into the box with the queen
- Put on a queen excluder, any supers and the roof above the new brood box
  - If there are no supers and there isn't a nectar flow, feed the bees a strong syrup
- Go through the original hive and select 2 **open** queen cells and mark the frame/s they are on
  - Break down any other queen cells on frame
- Go through every other frame, shaking the bees off into the brood box and break down all the queen cells on the frames
- Reduce entrance, put on a crown board and roof **DO NOT FEED**
- if needed, feed old colony after 48 hours
- Remove QE from below new brood box
- After 5 days, check and remove any additional queen cells
- Day 7 move Old Brood box to other side of New Brood box
- Leave this hive undisturbed for 3 weeks



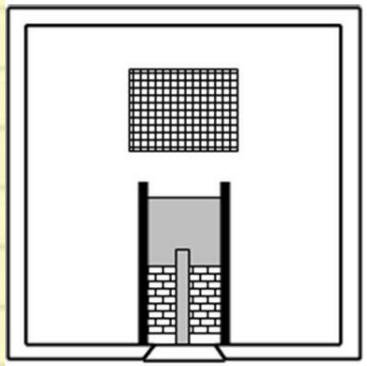

Roof
Super
Queen Excluder
Old
Brood Box
Queen Cells
Floor
Nucleus Method
Swarm Control
Queen on frame, 2 frames
brood, bees and stores
Entrance away from original


Roof
Old
Brood Box
Queen Cells
Demaree
Queen Excluder
Super
Super
Queen Excluder
New
Brood Box
Queen
Floor

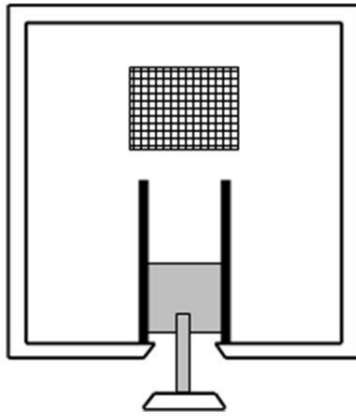
Snelgrove Board

Entrance Board

Horsley Board

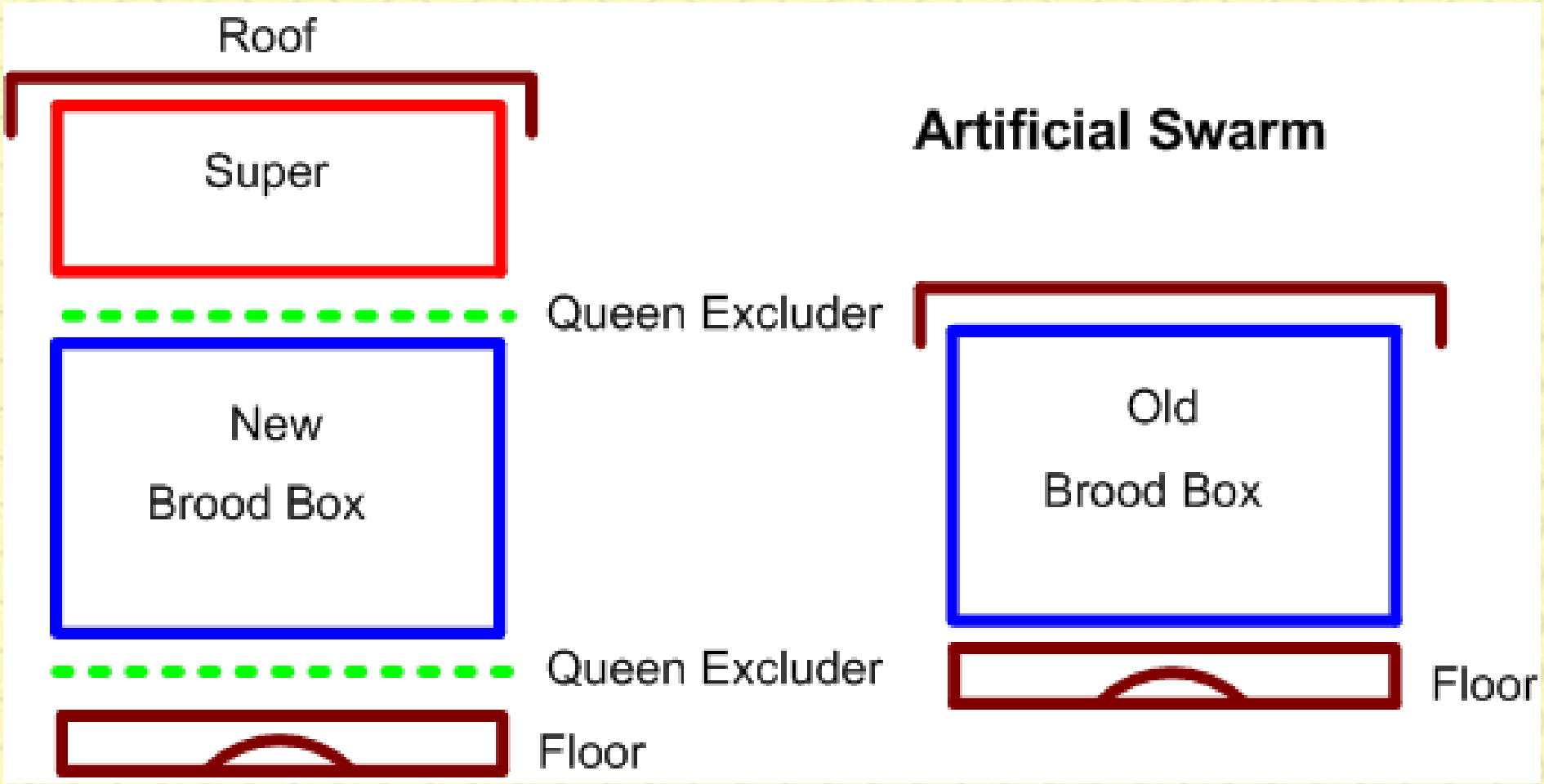


Day 1
Split Colony, close board



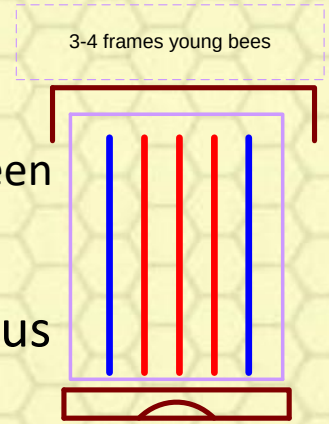
After 3-4 days
Open entrance,
completing the split

Pagden variation for Varroa Control

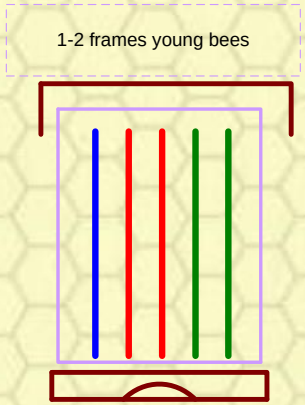


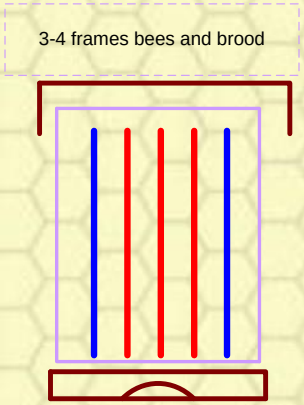
Uses of Nuclei

- Full size nucleus
  - Make Increase
  - Introducing queen



- Two frame nucleus
  - Mating Nuc
  - Swarm Control
  - Storing surplus queen





- Special management
  - Observation hive
  - Retiring queen
  - Raising queen cells (overflowing with young bees)

Moving a colony to another apiary

- Equipment needed
  - foam or other device to block entrance
  - Travelling screen
  - straps, staples etc.
- During the day
  - Replace crown board with screen
  - Fix hive parts using straps etc.
  - Put roof over screen
- In evening
  - Close entrance
  - Check Bee proof (Check for bees under floor!)
- Load in vehicle with frames running from front to back
  - Remove roof
  - On a long journey spray with water regularly
  - Make sure you have a veil to hand!
- On arrival, replace roof & remove entrance block
- Next day - Remove travelling screen and straps