



'Training the next generation of professional beekeepers'

Module 4

Management Practices (technical) in Beekeeping

Developed by Spey Valley Bees Ltd



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Spey Valley Bees

Topic 4 'The Use and Creation of Nucleus'



Introduction

In this topic we will look at the uses for nucleus hives, how to create your nuc and how to build up your nuc to a populous colony.



Topic 4 'The Use and Creation of Nucleus Colonies'



Learning Outcomes

Once you have completed this topic, you will

- Understand the various uses of a nucleus hive (nuc)
- And be able to
- Create nuclei efficiently for varying uses, including dismantling a large colony into several nucs



Quote from E.B. Wedmore, author of 'A Manual of Beekeeping'



“There is no problem in beekeeping that can't be solved, by either putting something into, or, taking something out of a Nuc, and, Nucs rarely give problems.”



Suggested Definition of a Nucleus if Buying or Selling



- British Standard deep Hoffman frames with wired combs, in good condition. No excess of drone brood
- Five combs, at least three with brood
- Brood at all stages, eggs, larvae and sealed brood
- Adequate stores
- Laying queen, marked and raised in current or previous year



Nuc Hive Variations



Nucs house a small sustainable colony and can be of various construction and pattern



Photo: G. Collins



Types and Construction



- Wood, cedar or plywood
- Polyurethane
- Waxed cardboard or correx
- Holds 2 to 6 Frames



Types and Construction



Roof deep enough to take jar or rapid feeder



Photos: G. Collins



Reduced Entrance



Nucs should have a small round entrance easy to defend against robbing bees and wasps



Creating the Nucleus Colony



- From strong disease free colonies
- Brood and bees from 1 or more colonies
- Spare queens or ripe queen cells
- Stores – pollen & nectar



Standard 5 Frame Nuc Recipe



2 frames of **food** *with bees*

2 frames of **bees** *shaken in*

2 frames of **brood** *with bees*

1 frame of **space** for laying

Queen (cell, virgin, or mated) *optional*

Notes

- Food should be pollen and honey
- Brood should be biased towards sealed brood
- Will nuc stay or be moved off site?



Standard 5 Frame Nuc Arrangement

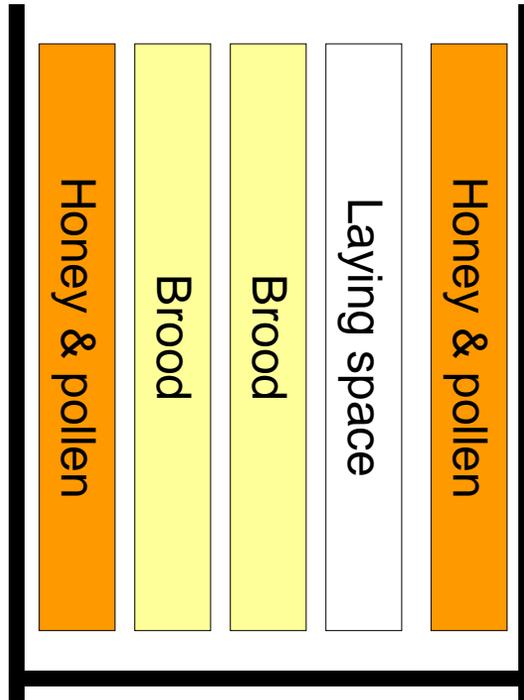


Photo: G. Collins



Other Nuc Set Ups



- In a full hive
- Combs at one end and a dummy board.
- Reduced entrance to protect from robbing and loss of heat



Two Nucs in One Brood Box

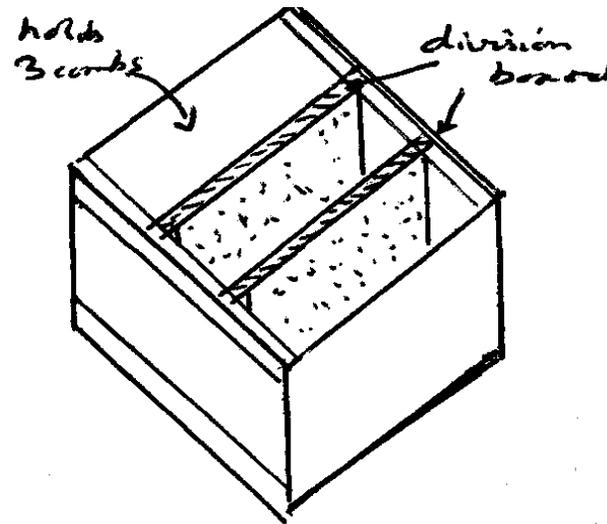


- Use bee tight partition boards to divide box

3 or 4 Nucs in a Modified Brood Chamber



- 2 or 3 division boards
- Modified floor with separate entrances
- Bees must not mix



Purposes for Nucs



- Making increase or for sale
- Queen introduction when re-queening
- Queen mating
- Housing a swarm
- Boosting a colony for a specific crop
- Retirement home for a special queen
- Swarm control



Purposes for Nucs



- Spring contingency
- Educational use as observation hive
- Assessing a new queen
- Storing a surplus queen
- Over-wintering a queen
- For drawing foundation



Prepare a nucleus colony to remain in the same apiary for introduction of a mated caged queen

- Find and cage the queen in original colony
- Transfer 2 frames of food, 2 frames of brood, 1 empty frame of drawn comb into the nucleus hive. A gentle shake gets rid of older flying bees
- Shake in 2 or 3 more frames of young bees
- Insert new queen in quick release cage
- Close nuc entrance with sappy grass
- Locate nuc away from main hives in shade



Prepare a nucleus colony to remain in the same apiary for introduction of a mated caged queen



- Leave alone for at least a week
- Don't feed for 2 or 3 days
- Add frames of drawn comb/foundation to parent colony
- Release original queen into original hive
- If moving to out-apiary no need to shake in more bees



Mating Nuc Options



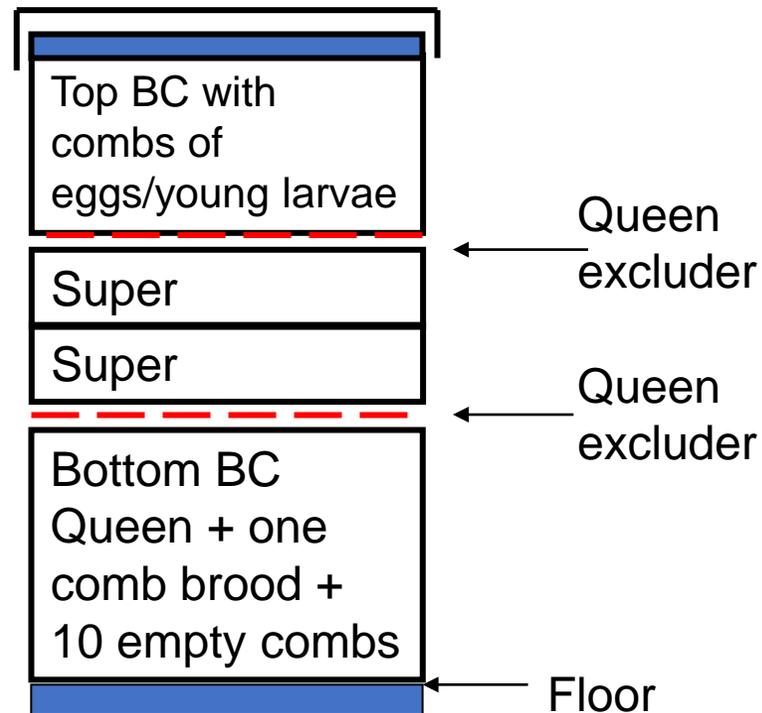
- As for mated queen above, or
- Make a nuc of house bees (Demaree)
- Nurse bees haven't flown much so won't leave
- They accept a new queen more readily
- Mini nucs (discussed later)



Making a Simple 3 Frame Nucleus



- No need to find the queen
- Remove 3 combs, brood, pollen and honey
- Shake or brush all bees back into hive
- Place in new brood chamber, brood in centre



Making a Simple 3 Frame Nucleus



- Place Q/X over original brood chamber
- Place new brood chamber on top and close hive
- Nurse bees will move into top box to care for the brood
- Remove box and transfer frames into nuc box
- Add ripe queen cell or virgin queen
- Leave alone for 3 weeks





Place 1 QC **on** brood frame



Hiving a Small Swarm



- Easier for bees to keep cluster warm
- Aids drawing out of foundation
- Feed sugar syrup in a contact or frame feeder after 48 hrs
- Treat for varroa



Swarm Prevention and Control



- removing 1, 2 , 3 or 4 frames from a colony can delay swarm preparations
- removing the old queen with a frame or two from a colony preparing to swarm can prevent a swarm issuing.



Nuc Making Constraints



- Time of year – don't make nucs too early or too late
- The parent colony needs to be strong enough to bear the loss of bees and brood
- Beware of robbing by other colonies or wasps
- Need to consider queen supply – mated queen, virgin queen or queen cell



Nuc Pitfalls and Problems



- New queens may be rejected
- Ventilation important but not a through draught
- Keep entrances small to prevent robbing
- Minimise drifting by facing entrances in different directions
- Ensure sufficient stores at all times
- Manage the nuclei to build it up for winter



Building Up the Nuc



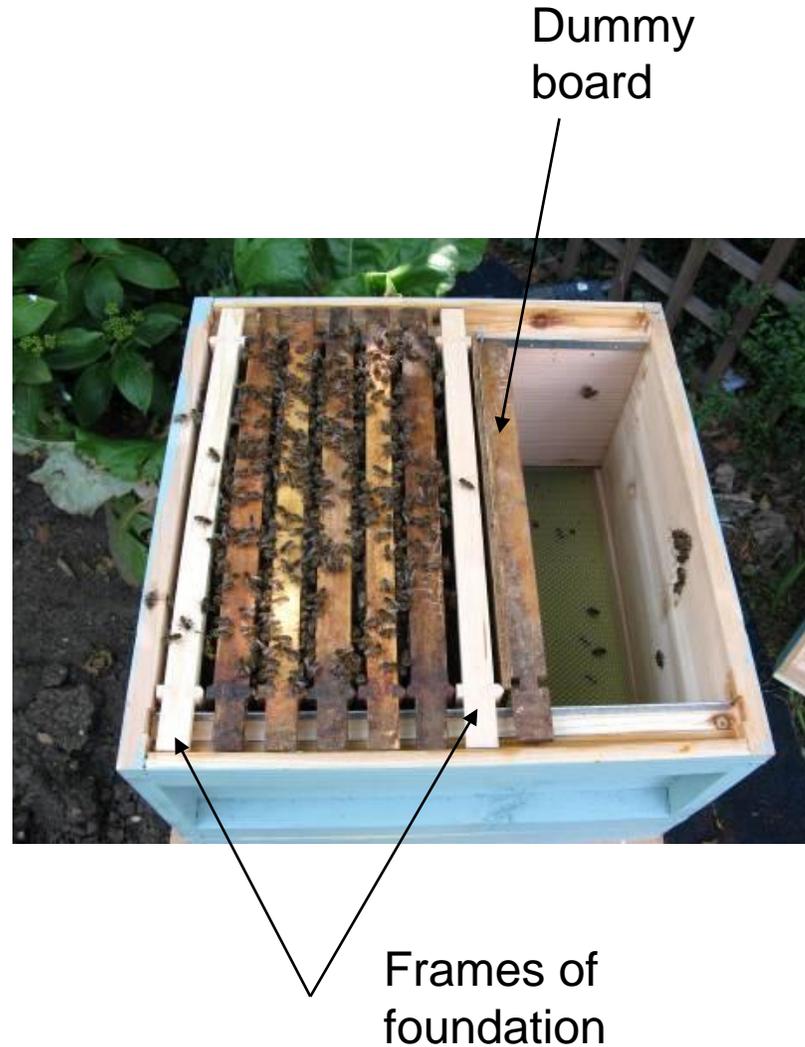
- Nuclei build up faster if fed sugar syrup (1:1) in contact or frame feeder
- Add frames of foundation as colony expands
- Reduce entrance to prevent robbing
- Move dummy board along as they expand



Building Up the Nuc



- Add a frame of emerging brood every few weeks from a disease free colony
- Inspect regularly
- Keep feeding
- Transfer into full size hive, restrict space with dummy board
- Add super if required



Moving into a Full-Sized Hive



- Assuming you have a queen right five comb nucleus
- Move the nucleus hive to one side and place a floor and brood chamber on its original site.
- Find the comb with the queen on it and place it in the new brood chamber. Transfer the rest of the combs arranging them in the same order as they were in the nucleus.
- Shake or brush in any bees that remain in the nucleus hive and move it well away
- Add 2/3 frames of foundation and a dummy board
- Keep feeding if no flow on



Topic 4 'The Use and Creation of Nuclei'



Summary

You now:

- Understand the various uses of a nucleus hive (nuc)

And can

- Create nuclei efficiently for varying uses and build it up to a populous colony



Topic 5 'Uniting Colonies'



Introduction

This topic looks at the reasons for uniting colonies of bees and the methods used.



Topic 5 'Uniting Colonies'



Learning Outcomes

Once you have completed this topic, you will :

- Be familiar with the methods and precautions to be taken when uniting bees,

And be able to:

- Unite colonies of bees safely using several methods



Introduction



- Each hive has its own 'hive' or 'colony' odour
- Bees will prevent strange smelling bees from entering the nest often fighting with them at the entrance
- This is particularly true in times of dearth but not so during a nectar flow
- The best time to unite colonies is during a flow or while feeding both colonies sugar syrup



Considerations



- Both colonies should be healthy?
- Both colonies should have sufficient stores
- The two colonies should be located next to each other in the same apiary
- The best time to unite is in the evening when the bees have stopped flying?
- Only one queen should be kept
- Don't unite if one colony has laying workers



Reasons for Uniting Bees



- Colonies that are too small to overwinter or not strong enough for a spring flow
- To reduce the number of colonies in the apiary
- Uniting a queenless colony to a queenright one
- Uniting a nucleus to a full colony as a way of introducing a queen
- To create one large foraging force for moving to a crop, e.g. rape, borage, field beans, heather



Uniting Tactics



- Allow the bees to mix slowly.
- Use a degradable barrier (newspaper)
- Disorientate the two colonies to be united.
- Confuse the bees with strange scents or powdered contaminants.



Methods of Uniting



- Newspaper method
- Exposure to light
- Spraying with water or very dilute syrup
- Dusting with flour or talcum powder
- Shaking all the bees in a heap in front of the hive, and letting them run in together

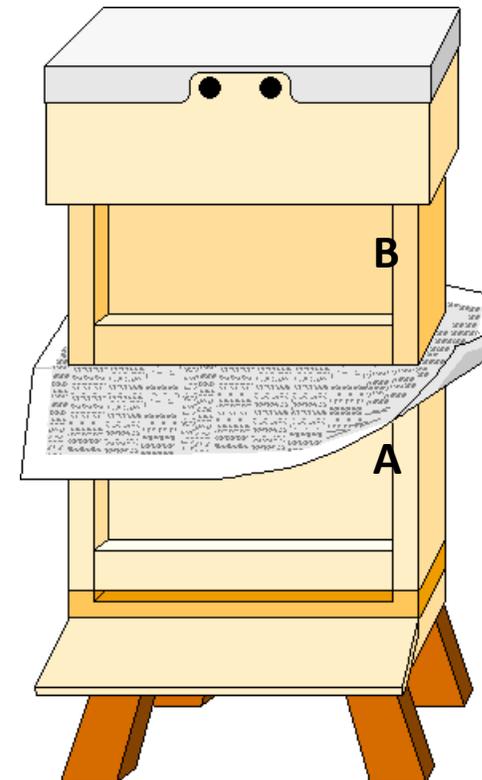


Newspaper Method



This is the most successful method

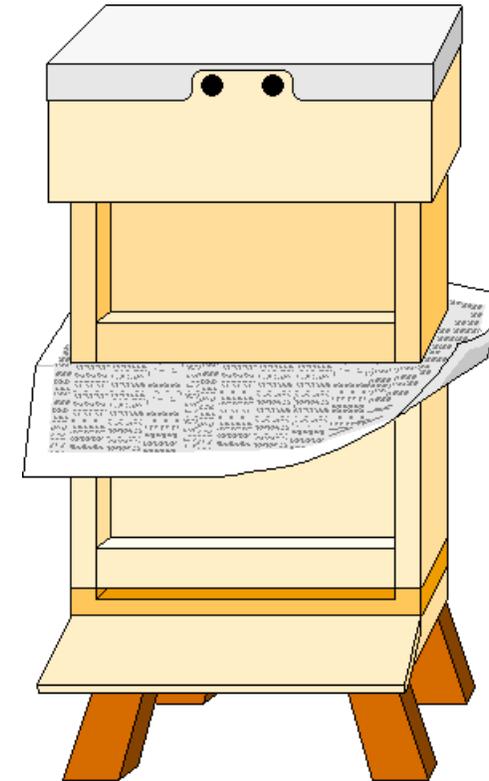
- Decide which colony is going to be on the bottom.
- Remove the unwanted queen
- Place a sheet of newspaper over the top of brood chamber (A) and make a few small holes in the paper
- Newspaper can be kept in place with a QX or pins
- Lift brood chamber (B) on top brood chamber (A)



Newspaper Method



- Place any supers above brood chamber (B) with a QX and another sheet of newspaper between
- Replace crown board over supers or if overheating may be an issue use a ventilation screen
- Bees will chew through newspaper and unite peacefully usually within 24 hours
- Leave alone for a week
- If queen is laying well rearrange brood combs and bees into lower box
- Remove excess frames



Uniting Using Newspaper



Photos: G. Collins

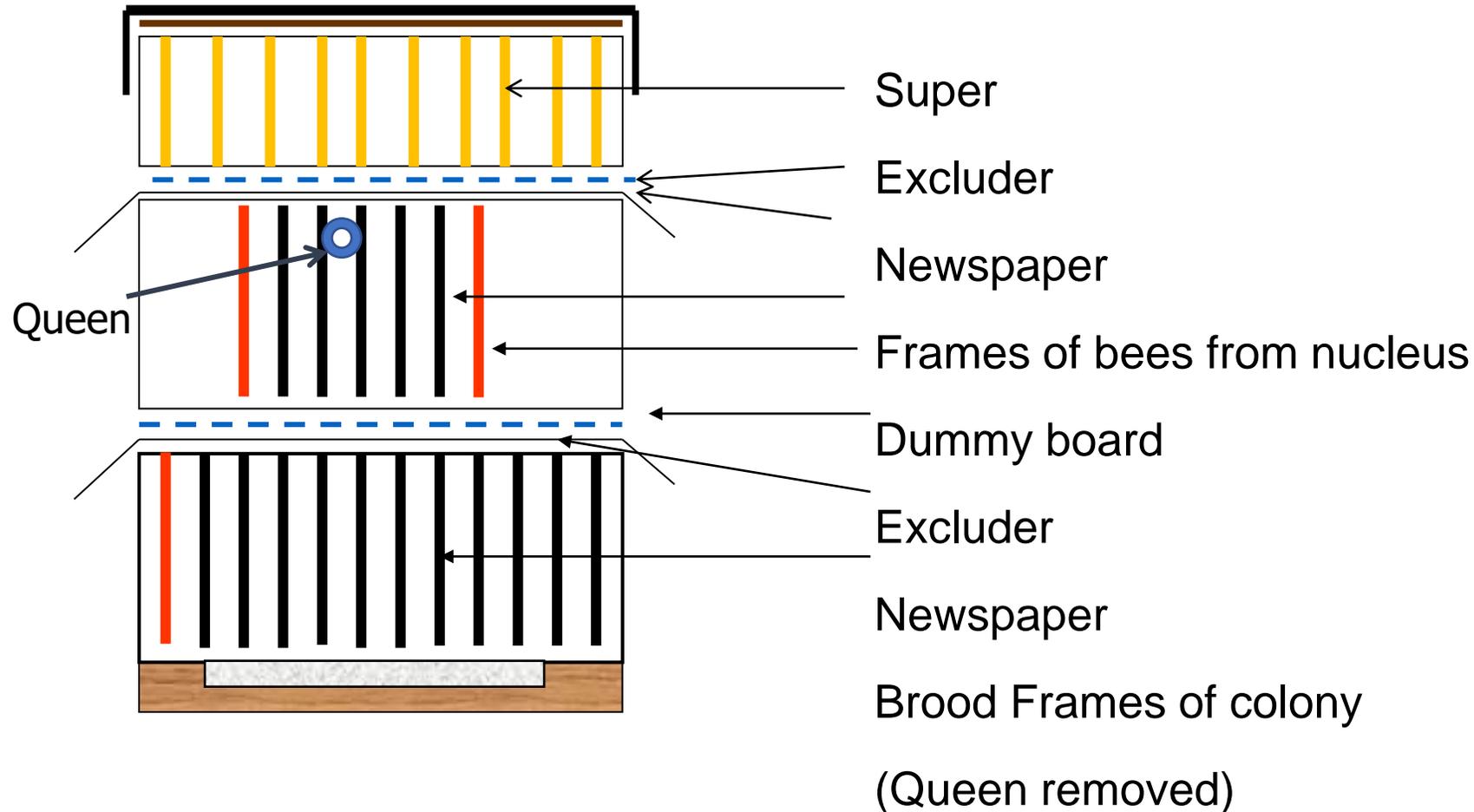
Uniting a Nuc with a Colony for Re-Queening



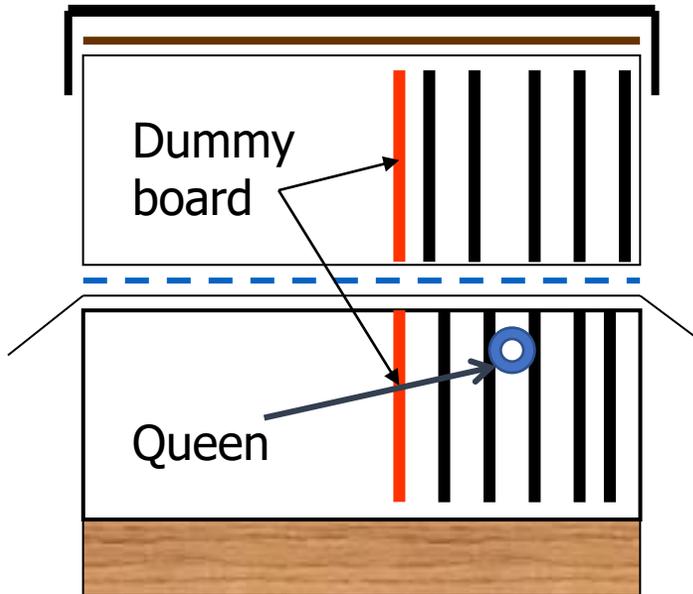
- The newspaper method is used.
- Transfer nuc into full brood box with extra brood frames and a dummy board
- Remove the queen from the receiving colony
- Place the nuc with new queen in brood box on top
- Leave alone for a week until the queen is laying
- Rearrange brood combs and bees into lower box ensuring the queen is on one of the combs
- Shake /brush any bees still left in the top box into the bottom one



Uniting Nucleus to Colony with Super



Uniting Two Nucs



- Remove one queen
- Transfer frames from both nucs into full size brood box hives flanked by dummy boards
- Unite using newspaper method
- After 1 week, re-arrange combs into 1 box – brood in centre, pollen on edge of brood nest and honey on outside



The Next Day



- Newspaper chewed away between the two nucs
- Bees mix peacefully
- 1 week later, re-arrange brood combs and bees into lower box ensuring the queen is on one of the combs



Photos: G. Collins



Z-Fold - Uniting 2 or 3 Nucs

Place each set of nuc frames in single or double brood chamber and separate with newspaper



This provides vertical and horizontal separation



Exposure to Light Method



- Uniting 2,3 or more very small colonies in autumn
- Or uniting 2 nucs
- Find and cage the preferred queen, destroy unwanted queen (s)
- Bright light calms bees and they are less likely to fight
- Remove frames from each nuc, expose to light and place alternately but well-spaced in one brood chamber over a floor



Exposure to Light Method



- Shake, brush in remaining bees and smoke heavily
- Leave for 10 minutes then move frames together
- Remove the nuc boxes so that flying bees orientate to the new hive
- Place caged queen between centre brood frames at top
- Re-assemble the hive
- Feed if necessary



Uniting Swarms



- 2 or more swarms caught the same day can be thrown together into an empty box, shallow or deep, over a floor
- Fill a brood box with foundation and place on top
- Add a crown board and re-assemble hive
- Queens will fight until one remains
- Remove empty box after a couple of days
- Feed if necessary after 48 hours
- Swarms caught on separate days should be united via newspaper method



Water Sprayer



- Uniting a nuc into a main colony
- Choose a queen to remove and do so
- Ensure the nuc and main colony are side by side
- Spray the frames of bees in main colony
- Spray the frames of bees in nuc colony
- Add the nuc frames to edge of main colony
- Re-assemble hive
- Can also use flour or icing sugar in similar way



Topic 5

Summary



You are now:

- Familiar with the methods and precautions to be taken when uniting bees,

And are able to:

- Unite colonies of bees safely using several methods



Topic 6 'Feeding Bees'



Introduction

This topic looks at the theory and reasons for feeding bees, the general principles and precautions to take and we will also look at the different types of feed and feeders that can be used.



Topic 6 'Feeding Bees'



Learning Outcomes

Once you have completed this topic, you will :

- Understand the theory and practice of feeding honeybee colonies in varying circumstances, the different feeds available, precautions to be taken and the different types of feeders available
- And be able to:
- Use differing methods to feed your honey bees



Introduction



Bees require:

Nectar/honey to provide carbohydrates (energy source)



Pollen to provide protein (fats, essential amino acids, vitamins, minerals)



Why We Feed Bees

- Carbohydrates but more importantly proteins needed for brood rearing especially in the spring
- Overwintered/nurse bees consume large amounts of pollen in the form of 'bee bread'
- This activates their hypopharyngeal glands that produce brood food to feed the developing larvae
- Circumstances, e.g. bad weather, spray damage, can prevent foraging so there will be no food coming into the hive.
- This can lead to the death of the colony without beekeeper intervention



Bees Can Starve at Any Time of Year



Get to know your bees – some are more frugal than others!

Assess for food/stores at each inspection and feed if necessary

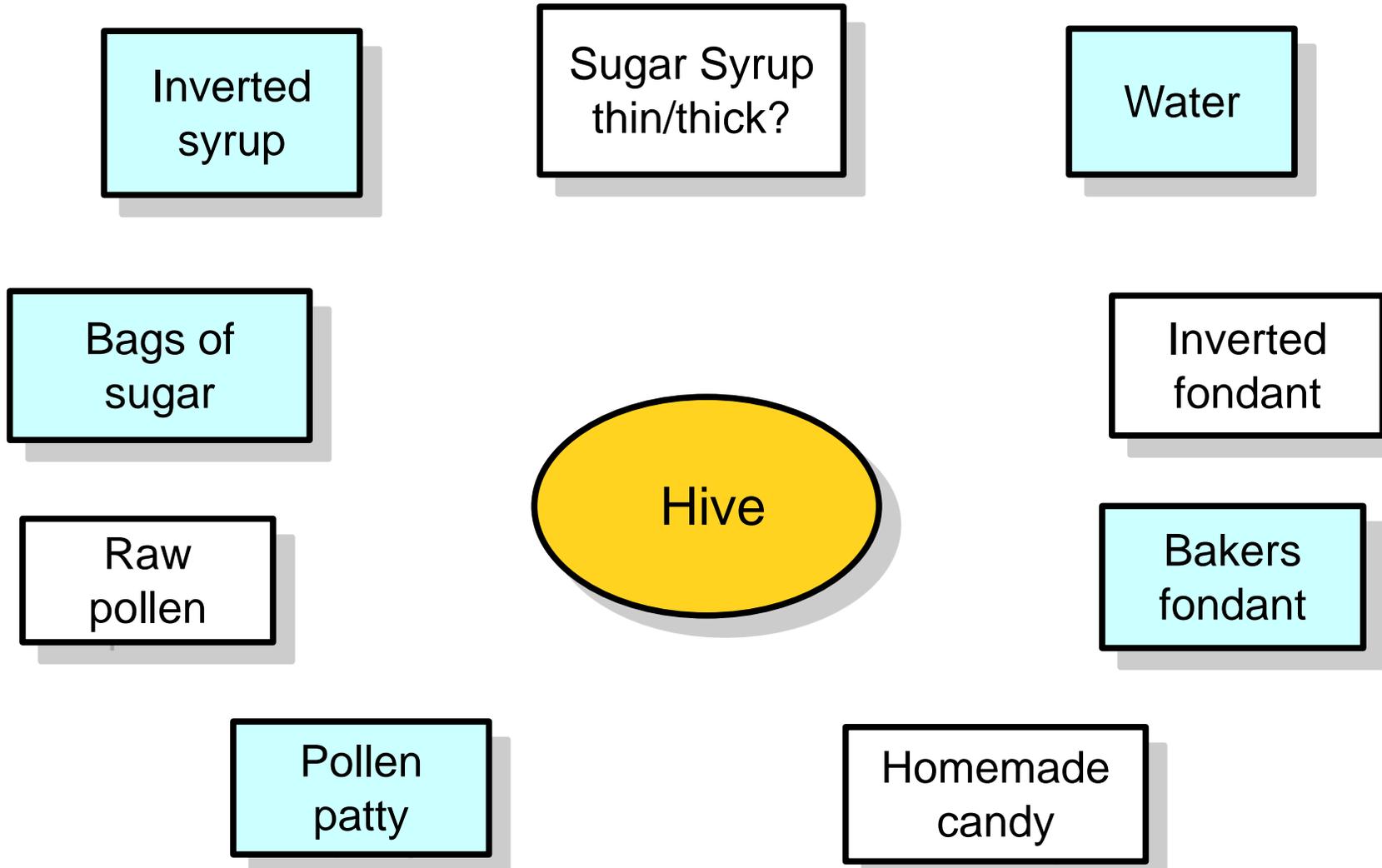
The skill of the beekeeper is keeping the colony strong and healthy for when the main nectar flow occurs

Don't rear queens from high consumption strains

Starvation is usually the beekeeper's fault!



Types of Feed



What NOT to Feed



Don't feed honey – even from your own bees as it

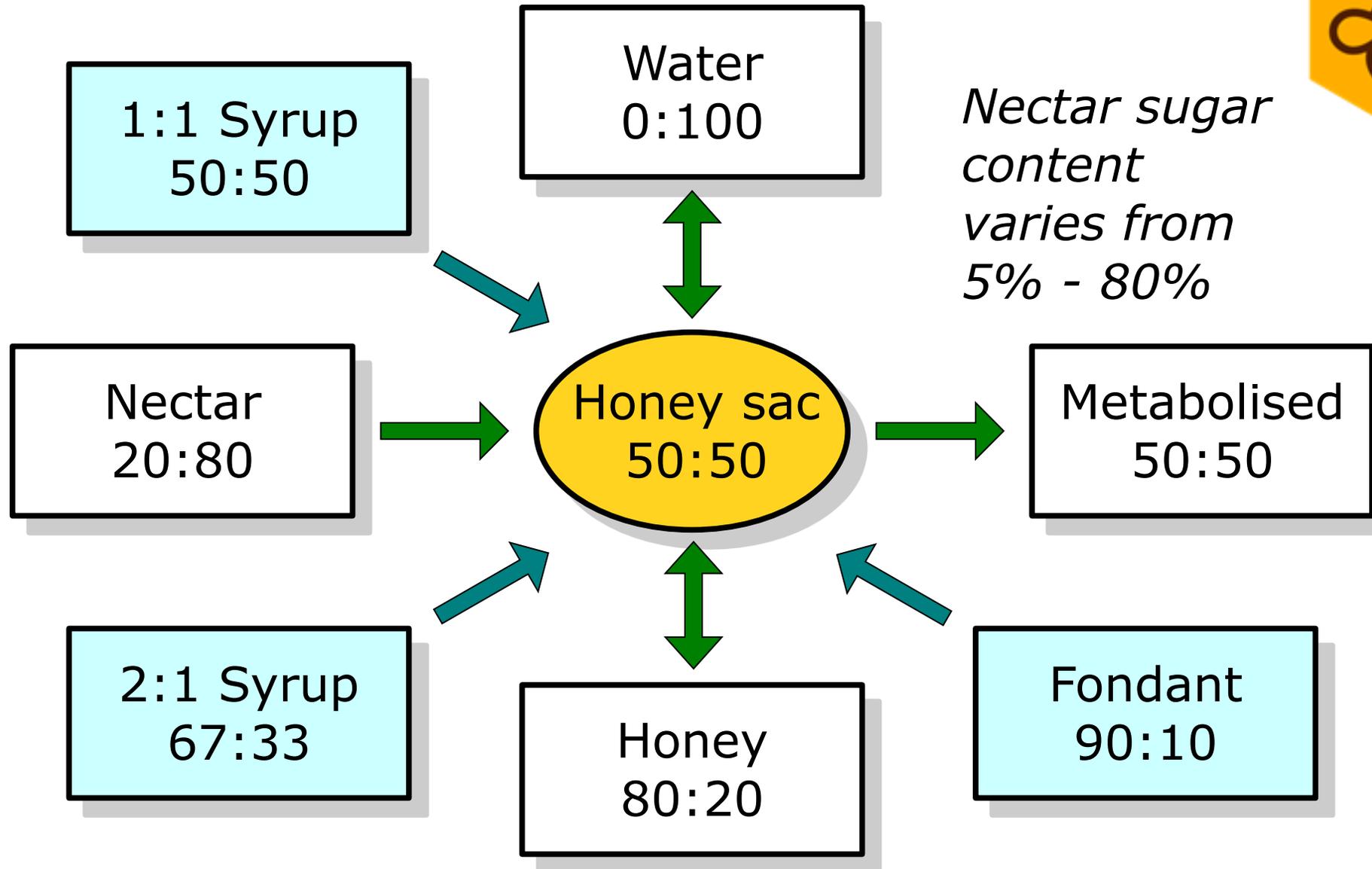
- Can spread disease, e.g American foul brood, and it
- Increases the likelihood of robbing due to excitement

Don't feed brown or raw sugar as it

- Can cause digestive problems for the bees, and
 - Is not fully digestible so can result in dysentery
- **The only sugar to feed bees is white refined sugar!**



Sugar – Water Relationship



Making Sugar Syrup



1Kg. Sugar to 1 litre water gives a 50% sugar solution, the highest concentration bees can digest. This is fed for immediate use.

1.6 Kg to 1 litre water makes a concentrated syrup suitable for storage for winter.

1Kg to 2 litres makes a thin syrup, sometimes used to stimulate laying/brood rearing in the Spring.



A. Leitch



Making Sugar Syrup



Can use hot or cold water but don't heat it in a pan as this can make it dangerous to the bees (HMF)

Stir until all the sugar is dissolved and the liquid is clear.

Keep sugar from settling for quicker results



A. Leitch



A. Leitch



Sugar Syrup – Larger Quantities



For large quantities fill a container half full of water and add sugar until the level is a few inches below the top and stir until liquid is clear



A. Welch

Sugar Syrup – Larger Quantities



A. Welch



A. Welch



Storing Sugar Syrup



To prevent fungal growth add thymol crystals

Use a small sealable bottle.

30g thymol crystals dissolved in 150ml of surgical spirit or isopropyl alcohol

Add 5ml / 3 gallons of sugar syrup

Thymol may also prevent unsealed sugar syrup fermenting in the hive



Feeding Sugar to Bees



Depending on your location in the E.U. feeding sugar can be divided into three categories

- Autumn feeding
- Emergency feeding
- Stimulative feeding



Autumn Feeding (temperate climates)

In temperate climates your bees should be fed to provide winter stores

First of all, assess colony stores

Colony needs at least 45lb of stores to overwinter (that's 9 frames in a brood chamber)

Sugar syrup mix is 2lb to 1 pint water or 1kg to 660mls water) or you can feed inverted syrup bought from manufacturers

Use rapid feeder over feed hole in crown board or Miller/Ashworth type feeders

Complete feeding by end of September

You can overwinter bees solely on fondant by placing a large block of fondant on the top bars and adding more if needed



Precautions When Feeding



To prevent robbing which can spread disease and excites the bees

- Don't spill syrup or leave brace comb lying around the apiary
- Don't keep hives open longer than necessary
- Feed in the evening when the bees have finished flying
- Feed all hives at the same time
- Fit reduced entrance blocks to smaller colonies / nucs
- Make sure hive is bee/wasp tight at other parts of the hive
- Make sure the feeder doesn't leak or syrup will run down the outside of the hive or out through the entrance.



Robbing



- Bees are inveterate robbers and once started robbing is very difficult to stop
- Hive can be robbed by bees or wasps
- Can spread disease and can result in fighting and death of a weaker colony
- Robbing usually starts after nectar flow and in times of dearth and is usually due to bad management practice (see previous slide)



Actions to Stop Robbing



- Prevention better than cure so follow good apiary practice at all times
- You can swap the robbed colony with the one doing the robbing
- If feeding a nuc, site away from main hives or ideally in a different apiary more than 3 miles away
- You can move the robbed hive to an out apiary more than 3 miles away, or
- Move the robbing colony to an out apiary more than 3 miles away



A reduced entrance is easier for the bees to defend



Photo by Gerry Collins NDB



Emergency Feeding



- Bees can starve at any time of year and it is your responsibility to ensure they don't
- Whenever they are low on stores - FEED!
- If you are carrying out 7 days inspections then 10lb (4.5kg) of stores (2 full BS deep frames) is enough



Emergency Feeding



In extreme cases the bees may appear comatose but may still be saved by doing this:

- Spray the bees with warm thin syrup solution asap, or
- Fill an empty comb with sugar syrup and place the comb adjacent to the bees
- When revived feed sugar syrup in contact feeder



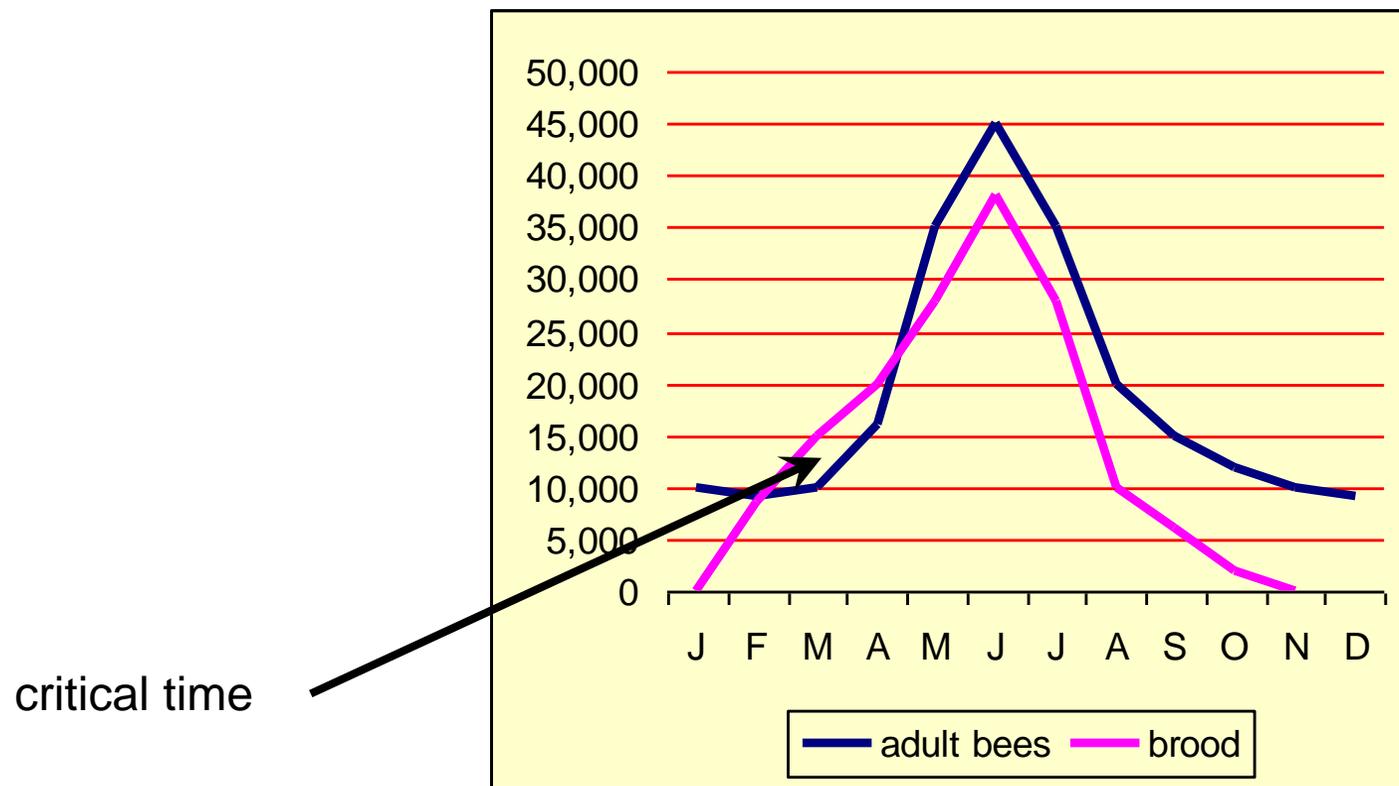
To Prevent Starvation in Spring (temperate climates)

If the colony is low on stores in spring feed sugar syrup in a contact feeder (1 to 1 ratio, 1Kg. Sugar to 1 litre water)

Or place fondant and/or pollen patties on the top bars



Brood to Adult Bee Ratio (temperate climate)



I. Davis



February to April are the months when the bees will be using up food reserves fast as the colony expands and produces more brood and it is a critical time for the colony. At this time, when the brood is greater than the amount of adult bees, the brood can easily succumb if it suddenly gets cold enough to prevent the bees foraging, so keep a close eye on them and feed syrup if necessary (1 to 1 ratio).

June Gap (temperate climate)



- In temperate climates, the June gap is the period between the spring flowers ending and the summer flowers starting and colonies can sometimes starve at this time
- If you remove any spring honey in June be prepared to feed the bees
- Never leave your bees short of stores



Feeding in the June Gap



- Don't feed syrup if there are supers on the hive as it could mix with the honey
- Best to feed a block of fondant over the feed hole in crown board
- You can also feed bags of sugar - puncture the bag, dunk in bucket of water for 20 seconds and place on the top bars



Emergency Feeding in Winter (temperate climate)



- In temperate climates bees can run out of stores in winter but correct autumn feeding prevents this!
- To check stores in winter, heft or lift the hive on all sides from the floor with one hand and you will be able to gauge the weight
- If unsure you can also have a quick look inside the hive
-
- Place fondant on the top bars above the cluster of bees and check every 2/3 weeks (replace if eaten)



Isolation Starvation



- In temperate climates, during winter, bees can starve due to 'isolation starvation' even with plenty of stores in the hive
- The bees don't move to fresh stores only a few inches away and the cluster can get isolated from the stores
- To prevent this place fondant directly over the cluster on top bars
- Surround with an eke or super and add some insulation
- Check regularly and add new fondant if eaten



Hefting the Hive

- Do this in winter to assess stores in the hive
- ‘Heft’ or lift the hive on all sides from the floor with one hand and you will be able to gauge the weight
- If the hive feels “light” you will need to feed them
- But bear in mind isolation starvation



Stimulative Feeding in Spring (temperate climate)

- In temperate climates where spring flowering oil seed rape (OSR) is grown, strong colonies will gather a good harvest of honey
- You can build the colony up by feeding a thin syrup, 1kg to 2 litres of water, but only about 2 litres a week in a contact feeder
- This mimics a nectar flow and the queen will increase her laying rate accordingly
- Don't feed syrup until bees are flying freely i.e. not before March and about 6 weeks before the OSR is due to flower
- If short of pollen also feed pollen patties
- Some beekeepers practice stimulation for bees in late summer before the main autumn feed to boost the number of bees going into winter



When else do we feed sugar to bees?



- Making up nucleus /artificial swarm
- When carrying out a shook swarm
- When hiving a swarm (after 48 hours to allow any bacteria to be voided from the gut) as this will encourage them to draw the foundation into comb
- When uniting colonies
- When introducing queens and queen rearing
- After poisoning incident, spray damage as there will be a reduction in foragers so less food will be coming into the hive
- When administering medicaments e.g. OTC



Types of Feeders



Rapid Feeders – plastic or metal

- Contain limited amounts e.g. 1 to 4 pints.
- They are easy to refill in home apiary
- They need an empty super around them to provide the space
- Bees won't enter them in cold weather so are of no use for spring stimulation
- Danger of drowning bees if lid not on properly



Miller or Ashforth Feeders



- These fit neatly on top of the hive over the brood chamber and are ideal for autumn feeding especially at out-apiaries
- You need to use a cover board over the feeder to prevent bees gaining access and drowning
- They are not suitable for use in a cool spring
- Regular maintenance needed as they can leak. Seal with bitumen or car underseal, silicone, PVA etc
- Some need filling with water and leaving for a few hours to allow wood to swell
- The hives need to be level when using these feeders



Contact Feeders

- These are simply buckets that operates on vacuum principle that can be used all year with no chance of drowning bees
- They are ideal for spring feeding as the bees will access them easier
- Fill the feeder, fit the roof and then invert over another container until the syrup stops coming out - avoids spills
- You need to place an empty super around the feeder to provide the space.
- There is no contamination of contents but you do need to remove feeder and lid to re-fill it
- Sudden temperature change can cause leaks



Feeders for Nucleus Hives

- Frame feeders
- Jar feeders
- Frames of sealed stores
- Rapid feeder under modified roof
- Fondant over feed hole
- Modified Ashworth feeders



Frame Feeders



- Wooden, plastic or built-in
- Holds 2 or 3 pints
- Ideal for nucs
- Wooden float prevents bees drowning
- Safer to use grass stuffed in top of feeder as floats do get stuck



Entrance Feeders



In warm climates bees can be provided with water via an entrance type feeder

Fondant

There are 3 different types of fondant available to feed your bees



Bakers fondant, available to buy from butchers, bakers etc comes in 12.5kg blocks and is simply cut into smaller blocks of about 1 kg and inserted into food/freezer polybags. It requires no preparation and can be rolled into thin patties for easier use (if stiff place it in microwave for 60 seconds).



Inverted fondant can be bought from suppliers and comes in a strong polybag.



Home-made Candy is a mixture of sugar and water, gently heated and poured into a mold or tub to set.



Feeding Fondant



- Cut a hole or make slits in the underside of the polybag

Place:

- over the cluster on the top bars
- over feed-hole in crown board
- over a queen excluder
- in a tub with a piece of queen excluder in lid
- Use an eke or super to provide room
- Provide some insulation, e.g. sacking



Feeding Fondant



Photos: G. Collins

Honey as a Feed for Bees?



- NEVER feed Honey to your bees as it can spread disease
- Don't leave wet combs out for 'bees to clean up' for the same reason
- Honey that has begun to ferment can be fed back (in spring) but not for winter feed as can give bees dysentery
- It is OK to feed combs of stored honey and pollen



Feeding Pollen

- Pollen is often fed in the spring to encourage brood production
- Use a pollen patty - a supplement or raw pollen
- Collect pollen only from strong disease-free colonies
- Do not use other beekeepers' pollen as it can contain disease
- Use a pollen trap to collect pollen from foragers
- When feeding substitutes follow suppliers recommendations
- If regularly insufficient pollen in hive re-locate apiary



Topic 6



Summary

You now

- Understand the theory and practice of feeding honeybee colonies in varying circumstances, the different feeds available, precautions to be taken and the different types of feeders available
- And are able to:
- Use differing methods to feed your honey bees



Topic 6 'Feeding Bees'

Exercise/Quiz



Feeding scenarios

This is intended to get you to consider the correct feed, feeder and methods for a set of different scenarios you may find in the apiary throughout the year

Please fill in the blanks on the next two slides.

The activity should be completed within 30 minutes



Scenario	Occurrence if any	Feed /feeder	Additional comments
<p>It is March and you intend taking 6 hives to the oilseed rape in 6 weeks' time</p>			
<p>You discover bees dead and others spinning around on floor outside the hive entrance in May</p>			
<p>In June during inspections you discover only half a frame of stores in a hive</p>			
<p>In January you heft the hive and it feels light</p>			



<p>You bring 12 hives back from the heather in late October</p>			
<p>You have just made up a nuc to stay in the same apiary</p>			
<p>Mid-August and you have just removed 3 supers of honey</p>			
<p>June and you have just removed 3 supers of rape honey. The fields are now green. 1 half full super remains on the hive</p>			



Scenario	Occurrence if any	Feed /feeder	Additional comments
It is March and you intend taking 6 hives to the oilseed rape in 6 weeks' time		Feed a thin syrup, 1Kg/2litres, in a contact feeder to stimulate the queen to lay resulting in a big population of forager bees at the crop	Feed 2 litres a week. Bees unlikely to go up into a rapid feeder in cooler weather
You discover bees dead and others spinning around on floor outside the hive entrance in May	Bees have been poisoned by pesticides	Feed a 50:50 syrup, 1Kg. Sugar to 1 litre water for immediate use	Many of the foragers will have been killed so pollen may also need to be fed
In June during inspections you discover only half a frame of stores in a hive		Don't feed syrup if there are supers on the hive Feed fondant over feed hole in crown board or Bags of sugar, puncture bag, dunk in bucket of water for 20 seconds and place on top bars	
In January you heft the hive and it feels light	The colony is low on stores and requires feeding	Feed fondant over the feed hole in the crown board or placed directly onto the top bars	



Answers





<p>You bring 12 hives back from the heather in late October</p>		<p>If the weather is mild feed 2 or 3 gallons of inverted syrup in a bulk rapid feeder. Fondant can also be fed, placed on the top bars or over the fed hole in the crown board</p>	
<p>You have just made up a nuc to stay in the same apiary</p>		<p>Feed 50:50 syrup in a contact feeder or small rapid feeder under the roof, or feed fondant</p>	<p>The older foragers will fly back to the parent hive so don't feed for 3 or 4 days otherwise you can encourage robbing</p>
<p>Mid-August and you have just removed 3 supers of honey</p>		<p>Feed a heavy 2:1 syrup, 1.6 Kg to 1 litre water which is suitable for storage for winter</p>	<p>Reduce the hive entrance to minimise the risk of robbing</p>
<p>June and you have just removed 3 supers of rape honey. The fields are now green. 1 half full super remains on the hive</p>		<p>Feed fondant placed over the feed hole in the crown board</p>	<p>The colony will be low on stores and if the weather is poor they may starve</p>

Answers



Congratulations!

You have completed Module 4

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