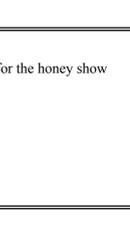
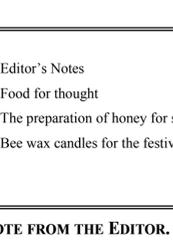


South Tipperary Beekeepers Association

Newsletter September 2010



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NOTE FROM THE EDITOR.

Greetings to all. This year will be remembered as a vast improvement on the previous three. Hopefully all got some return from your bees especially our beginners. It is a great way of encouraging people to stay in the craft. Now that you have buckets of honey and wax in stock preparing it for sale or as gifts may be your next problem. Quality always sells so it's important that you display it in the right manner.

This edition of our newsletter is focusing on preparing wax and honey for show and sale. I am delighted that as usual we got the experts to write about these articles. Also refer back to our April edition for further hints. Great advice from all including two world champions. Now that we have a new honey show secretary I'm sure she will be expecting everyone to have at least one or two entries in the honey show.

We are always looking for articles so please submit some relevant topic. It can be your own experience as a beginner or an experienced beekeeper. We would even appreciate a few bee jokes! It's great to see that again in this edition we have a poet among us. We are a bunch with many talents so come on let us all see your talents.

Please enjoy this newsletter and keep for future reference.

Date for your diary

CLONMEL HONEY SHOW—Entries received on the 25th September

and the show is open to the public on Sunday 26th Sept

Honey Show Dinner is on the 25th Hotel Minella.

BIBBA conference in Cahir full details on the web 3rd—5th September. Best of luck to the GBBG

FOOD FOR THOUGHT!

Irene Power

When I first heard about feeding vitamins to our bees I have to admit I wondered if we were going over the top & would be soon giving them cough syrup. Giving this more thought however, I reflected on the honeybee's diet & nutritional requirements. I am no dietician or nutritionist & honeybee nutrition appears to me to be a complex area & when considering feeding supplements to our bees there are a lot of factors to be taken into account. Honeybees collect four substances to ensure their survival:

1. **Nectar**—which is converted into honey & stored is a major carbohydrate or energy source.
2. **Pollen**—major source of protein, fats amino acids, vitamins & minerals
3. **Water**— used to maintain temperature & humidity of the hive and diluting stored honey.
4. **Propolis**— used to fill cracks, general repair & polish cells for the queen to lay in

So honeybee nutrition is principally concerned with the quality & quantity of nectar and pollen collected and stored, remembering that the real nutrition comes from the pollen as nectar is largely sugar. Bees not only store pollen and honey in the combs but they also store food reserves in their bodies & their ability to do this is very important to colony health, successful overwintering & spring build-up.

I'm sure you are all busy feeding your bees at the moment & preparing them for the winter, ensuring they have 35lb of liquid stores. We are also familiar with the feeding of 1 to 1 syrup feed in the spring to stimulate the queen to lay. Another reason to feed syrup is to encourage the drawing of comb. Feeding syrup to our bees is an important part of our honeybee management & could be the difference between the bees dying of starvation or not & it also helps to keep up the moral of the colony. However, it does not provide all the nutritional requirements of the bee & it could be compared to feeding our babies bottles of coke.

So how do we assess if our bees are getting enough nourishment & proteins? Signs to look out for are foragers returning with pollen loads, pollen storage around the brood nest, is there a variety of pollen, is the colony rearing drones, is the colony rearing brood at an appropriate level for the season, are the young larvae swimming in brood food? But apart from that I guess it is difficult to recognise protein deficiency in bees, if you have cattle it's much easier to see their ribs. Are our bees going to get fat on sugar syrup? Should we be feeding supplements? Location & available forage needs to be considered & an understanding of the demands put on the colony. Feeding supplements is not widely practiced here, as far as I know & there may be a lack of experience of it. The only way we will learn more is maybe to try feeding supplements to a percentage of the hives in an apiary & then compare how they do versus the rest. It would probably take a few years to get a real appreciation on whether it is of benefit or not & would you get return on investment. If anyone wants to try & let us know how they get on there are copious recipes for pollen supplements & also some new products available on the market. Some of these products also claim to combat disease. Below is a flavour of what is available—hope it's not too much to digest!

Vitafeed Gold is an enhanced liquid feed for honeybees based on natural bee extracts and molasses. It is said to strongly stimulate colony development & even though it contains no antibiotics it is advertised as being very effective when applied to colonies infected with Nosema.

Vitafeed Green is also said to stimulate colony development. It is based on essential oils & is a natural product rich in nutrients that can be used at any time of the year. Vitafeed green is advertised as being ideally suited for colony strengthening in preparation for winter, or build-up in springtime & provides a wide spectrum of protection. Thornes are selling both these products 250ml for £12.43 (5 treatments) or 1ltr @ £42.60 (to treat 20 colonies)

Other products on the market are HoneyB Healthy a stimulant with essential oils, Apiherb – an Italian food supplement which is also said to combat diseases, such as Nosema. Neaktapoll is a ready to feed pollen substitute.

THE PREPARATION OF HONEY FOR SALE

Redmond Williams/Nat Dip in Sc(Apiculture)

An old and true saying: "honey is perfect until man / woman gets their hands on it" must be one of the truest statements made in beekeeping. Just look at the beauty of a well-filled section – removed before bees have time to put travel stains or propolis on it. I always remember a section sitting on the kitchen and cutting into the beautiful structured wax combs, and watching the golden honey drip onto a slice of homemade brown bread – surely perfection!

Before I discuss the preparation of honey for show, I had better say a few words on honey from the hive to the honey house. Now lets go back to our own apiary and ask ourselves about hygiene practices. Did you hold smoke and ashes into the supers? Use chemical to repel the bees down from their golden hoard? Crush bees in your battle to separate from their hard won winter store? Put the full super on the ground or into a dirty car boot or trailer? Store them in the garage with your hank of winter onions or worse near any of those toxic liquids or chemicals that you will not store in your kitchen? Remember, your honey is someone's breakfast, lunch or snack and they do not wash or clean it! They think you did this for them.

Conscience pricked, let's get down to handling the crop with the supers in the honey house. First, you should do a little selection on the supers for colour light, medium or dark. We very seldom get dark honey in south Tipperary except those living near the Knockmealdown Mountains where some bell heather honey, a beautiful port wine colour, can be gathered. You should also sort your supers and frames into fully and partially sealed. Honey from fully sealed frames is of the best quality, has the lowest moisture content, and will last longest in store. The only thing left to do is to extract the honey as soon as possible when it has been taken from the bees. If you must store it for any length of time, you should have a dehumidifier operating in the store. Once honey has been extracted it should be stored in an air tight container with minimal air space at the top.

To prepare your honey for sale you should heat it at 40°C. To ensure that this heat is not exceeded I use two thermostats, one set two degrees higher than the other, both on the same power supply to the heat source. My heater is a dimplex cold watch heater. To achieve an equal distribution of heat, you should place a steel tray three inches above the heater. Your container should be placed a further three inches above the tray. This prevents hot spots occurring and your honey from being overheated. When heated you should skim the surface of your honey before straining, through two layers of a very fine cloth, into your honey ripener. I use nylon organza. Now return the ripener to the heating cabinet for a further twenty-four hours at 40°C. This will give your honey a shelf life of approximately six months. Before bottling your honey remove your honey from the heating cabinet and let it stand for forty-five minutes. This allows the honey to regain some of its viscosity and makes it easier to fill. The honey should then be filled into washed and air dried honey jars. You fill them by holding the jar at an angle of 45° which prevents air form being added to the honey. Once filled to the correct weight for your particular jar type put on your dust free lid. It is a good practice to weight all your jars. This can be done successfully on a digit kitchen scales (Remember: that kitchen scales are only a guide and are not calibrated or accurate enough for retail use). Well Done, Not a lot of contamination or loss of quality suffered!

Next, you must label your product which must meet certain legal requirements. These are: country of origin, written as Produce of Ireland; the name and address of the producer or packer; a description of the product, such as honey, run honey, comb honey; best before date, normally two years from the date it was bottled, lot number which must be preceded by the letter L, for recall if necessary and weight of the product in grams, size of figures must be 4mm for quantities between 200 g and 1kg. I included my phone number, which helps with re-sales but is not mandatory. I also use the federation tamper-proof label, sold to those who only sell Irish honey, which guarantees customers that the product is as I prepared it. The federation label has an added bonus when selling to a retail outlet as it includes a barcode.

Honey prepared and ready for delivery, as it came from the hive, should go to the shop in a nicely presented box or crate and should be delivered in a clean vehicle. Hard work done, it's time to reap your reward but remember the bees and don't let the shop owner rob your golden hoard, demand a fair price.

BEESWAX CANDLES FOR THE FESTIVE SEASON Dennis Ryan

Candle making has become a popular hobby and books describing the craft are numerous. Unfortunately each one deals with the modern, versatile, cheap paraffin waxes. They dispense with beeswax in one short sentence – it is too expensive – and so they will not give any advice on how to use it. A publication which I found most useful is "How to make Beeswax Candles" by Clara Furness – a must read by every beeswax candle maker. Another booklet of great benefit to exhibitors is one published by the London National Honey Show. It contains reprints of feature articles which have appeared in past schedules. Titles vary from "Preparation of Liquid Honey" to "The Study of Pollen". The article on wax is entitled "Wax for Show" by H. Padmore. The full set of articles is available for £ 3.50 at the Information Stand at the London Honey Show.

Precautions when making candles

Disastrous fires have occurred in bee sheds owing to accidents with wax rendering. The very reason we are making beeswax candles is because here we have a material which will vaporise and burn with a bright, steady flame. It is essential before embarking on candle making to be aware of the dangers and well equipped to deal with any mishap which may occur.

1. The best heat source is Electricity.
2. The vessel holding the wax should stand in a large vessel containing hot water.
3. Use a thermometer
4. Rendering wax required patience.
5. Break wax into small piece for melting.
6. When dipping, allow for displacement.
7. Have moulds and pouring areas well away from the source of heat.
8. All floors and surfaces should be protected. If you have a spill, wait until the wax is just setting when it can be peeled off.
9. In case of fire have a large wet cloth at hand.
10. Don't take risks.

Wick: - The soul of the candle'

1. The wick carries the molten wax upwards by capillary action to where, in contact with air it vaporises and is burned.
2. Always **prime** the wick in hot wax.
3. Wick should be correct size (thickness) for the diameter of the candle. e.g. for 2" diameter use number 6 wick, for 1½" diameter use number 4 wick. For 1" diameter use a number 2 wick and for ½" diameter use a number 1 wick. If wick is too big it will burn black and leave an ash. If it is too small, guttering will occur.
4. Purchase wick from Thorne.

Types of Candles:

1. Foundation
2. Poured
3. Dipped
4. Candles from Rubber, Silicone and Glass moulds.

1) Foundation Candles . . .

- i) Prime the wick.
- ii) Heat the unwired sheet of wax foundation with a hairdryer.
- iii) Fold the wax over the wick and roll white warm on a glass sheet. Ensure it is tight to achieve a round shape.
- iv) Seal wax finish by using a flame of match.
- v) Trim the wick. (You could taper by cutting the sheet diagonally at the start)

2) Poured Candles . . .

- i) Heat the filtered wax to 70° - 75 °C.
- ii) Prime the wick and draw it out straight.
- iii) Clip the end and hang it up to cool.
- iv) Dip and then roll between two sheets of warm glass.
- v) Repeat the dipping and rolling.
- vi) Suspend wick over wide mouthed hanging pot and using a ladle of molten wax pour the wax down the candle as it spins to return to its free melting position.
- vii) Continue to pour as the candle grows even and round.
- viii) If you see any distortion in the shape use your hand for rolling on the sheet of glass.
- ix) Cut off the port at intervals.
- x) When you are satisfied with the size and shape, allow it to cool completely.

3) Dipped Candles . . .

- i) Heat the filtered wax 70° - 75 °C. Pour into tall graduated cylinder which is placed in the heated water bath.
- ii) Prime wick and draw it out straight, clip the end and allow to cool by hanging on a wire coat hanger.
- iii) Dip wick into the molten wax in the graduated cylinder to within 2" of the bottom – same distance each time – and dip each candle the same number of times.
- iv) Always have extra molten wax ready to top up cylinder.
- v) After three or four dips roll the candle between two sheets of warm glass.
- vi) Dip until tapered diameter at base is ¼"
- vii) Cut off the port of wax at intervals.
- viii) Ensure tip of candle goes down into the wax each time.
- ix) After cooling flatten the base with a sharp blade and allow a ½" wick at top.

4a) Candles from Rubber Moulds

- i) Make timber stand with wire to hold wick.
- ii) Melt the filtered wax to 70-75 °C.
- iii) Cut wick to correct length.
- iv) Prime wick and draw it out straight.
- v) Prepare mould by lubricating with two drops of washing up liquid.
- vi) Position mould with wick in central position into mould stand.
- vii) When wax is at 70°C pour into mould, tap to expel air and leave overnight to cool.
- viii) When cold peel off mould having first rubbed two drops of washing up liquid to outside of mould.

Flatten base and trim wick.

4 b) Candles from Silicone Moulds

Method:

- i) Melt the filtered wax to 70-75 °C.
- ii) Cut wick and prime. Insert in the centre of bottom part of mould – allow 1" for top of candle.
- iii) Turn mould upright and use several rubber bands for tight closure – mould stands now on 1" wick holder.
- iv) **Pull wick through wick holder** – in the centre and pulled tight.
- v) Pour the heated wax and top up before wax is set.
- vi) Allow to cool and remove by opening mould.

Advantages:

- ⇒ Long lasting – heat & wear resistant
- ⇒ Easily removed from the cast.
- ⇒ Allow detailed casting.

4 c) Candles from Glass Moulds

Method:

- i) Prepare wax and wick as above but add 10% Stearin wax.
- ii) **Lubricate** glass mould with a mixture of Glycerine and washing up liquid.
- iii) Fit primed wick into heated mould.
- iv) Ensure wick is central and rigid, and using a **needle** to hold in position.
- v) Use **pipe lagging** as insulation and place upright in a stand holder.
- vi) Pour in molten wax and top up as it cools.
- vii) Leave to cool gradually overnight.
- viii) Remove when cool by placing in fridge. Flatten base and trim wick.

Wax Model:

As for moulded candles, (cannot be a candle)
No colour paint decoration.
Check schedule for correct weight.

MAKING A CAKE OF WAX FOR THE HONEY SHOW.

Notes taken from a work shop given by Redmond Williams

Before you commence to produce a cake of wax for any show it is very important that you study the schedule. Most shows have weight and thickness requirements. Although skill level is very important patencing attention to detail will produce very good results. Start preparation during the active season by inserting foundation in your supers. Only use cappings from frames drawn this year as bees incorporate some of the old wax into the sealing of frames which are contaminated with old brown comb or propolis etc. Avoid giving which propolis a lot. Wax produced while bees are on white cover or ling heather is the best, giving a nice white capping and a most pleasant aroma. Sources like dandelion give a very deep colour and are best avoided.

During extraction select the best most attractive frames and leave to one side. When all frames are together, wash out uncapping tray and uncaps them separately. Leave cappings to drain overnight. Do not press cappings as it would make it almost impossible to wash out all of the honey before melting.

The capping should be washed out with rain water the following days and not left any longer as the honey may start to ferment and could taint the wax.

This first washing would contain high honey content and is suitable for mead. Wash 3 times allow to drain after each over night. All water in contact will wax must be clean soft rainwater. After washing spread out on a few sheets of newspaper to dry. When dry remove any piece that is discoloured or foreign bodies. Take great care as this will determine the quality of the finished product.

When happy that the cappings are clean melt down into a block either in the solar wax extractor or in a water bath using a clean Pyrex jug as a container for the wax.

If using solar wax extractor make sure it is clean, put wax into micromesh tights and secure it in the extractor. Put in a clean plastic container to catch the melted wax, put 25mm of water in the bottom, will help to separate debris. When all has melted remove immediately otherwise the wax will get damaged. If using a water bath with a solid base saucerpan into which you put the Pyrex jug. Pyrex is more suitable than metal or aluminium as it will not react with wax.

To melt the wax keep adding the cappings a small amount at a time until the container is full. It should then be filtered through surgical lint fluffy side up. Which ever method you use always have twice the amount of wax you need for the cake as things seldom go right the first time.

To make the cake you will require surgical lint, filter paper, two Pyrex jugs, a mould, a pane of glass 25mm bigger than the mould (6mm thick), a rectangular basin, a wire tray, two thermometers, a 150mm plastic sieve.

The mould is the most important item of your equipment, have sloping sides and preferably be round which helps even cooling and prevents blemishes or cracking. Inner surface of the Pyrex mould must be blemish free. Examine closely as this will transfer on to the cake of wax. It is better if the surface of the cake comes close to the top of the mould when poured as the heat from the glass cover will be of more benefit to the finished surface. It is better to work at night when house is quiet. Never wear wax/or hairy fabric Polyester or nylon are better, ideally a white coat.

To make the cake

- Melt the wax in Pyrex jug by standing in water bath filter through the plastic sieve lined with surgical lint into another Pyrex jug.
- Do not allow water (rain) to boil strongly as it could splash into the wax.
- A wire rack underneath the jug will help circulation around the jug and prevent hot spots.
- Never cover the saucerpan with the lid.
- While still warm return the wax to the heat and melt again, then filter through filter paper into the cleaned jugs. Before you do this wash the sieve with boiling water to remove any hairs. Always discard the end of your wax because this will contain most of the debris. Cover the jug with plastic or cling film.

To pour the cake put the jug into the water bath to heat.

- While the wax is melting prepare the mould firstly determine the quality of wax needed. Weigh the mould then add the equivalent weight of water. Mark the water mark on the outside with marker.
- Place the mould in the basin, again on a wire rack and mark a water line 3mm underneath the wax level wash the mould in very hot water and once washing up liquid rinse and allow to drip dry. When almost dry add a few drops of conc. Wash up liquid and glycerine to the mould and rub it in well until it feels dry to the touch wash 6mm glass and drip dry.
- When the wax has melted allow it to cool. Place a thermometer in the jug and monitor until at 70°C, stirring occasionally with the thermometer to ensure the temperature is uniform.
- Be careful not to introduce any foreign bodies. When the wax is nearly 70°C fill the basin with water at 66°C Adjust is necessary.
- Take the mould from the oven and float it on the water. Pour the wax into the mould gently and avoid splashing or waved up the sides. Cover with plate glass and leave to the cake has not cracked and rippled immerse it in the water and it should float out, otherwise place in fridge for a while. Handle cake with care, dry it with a towel but do not rub moulded side. This prevents pieces breaking off when the judge is testing for plasticity.

EXOCRINE GLANDS (Part I)

When we talk about the (Exocrine) Glands we are relating to the ones that secrete to the bee's body to the outside. Most people think about the wax glands but there are several others all playing an important part in the life of the bee and more importantly the colony as a unit. The following is an account of two of these glands and the part they play.

Post-cerebral and thoracic glands

Known collectively as the salivary gland. The post cerebral is located behind the brain where as the thoracic is located in the thorax. They produce a liquid passing from the glands into tubes that joins in the head passing under the pharynx and opening a liquid salivarium from where the secretions are used via the proboscis or in the primarily H₂O to moisten solid food.

Secretion is mainly H₂O but slightly alkaline. The thoracic glands are developed from the silk glands of the larva and have a reservoir preceding the outlet duct. They are present in Q,W,D. The post cerebral glands have no reservoir. They are equally developed in the Q and W but not in the D.

Post cerebral acini are more translucent than the creamy bodies of the hypopharyngeal gland and have a different characteristic shape. The acini are arranged in small bunches on a branching system of tubes which run into a median duct under the pharynx.

The thoracic glands are rather compact bunches of short cylindrical bodies arranged on branches of the main ducts and their secretions is stored in two small sacs from which main ducts pass to the median duct in the heads.

The mandibular glands

The glands are in all three castes, the largest in the Q and the smallest in the D. Located one gland each side of the head above the mandibles.

The lumen of the gland acts as a reservoir under pressure and the outlet can be opened and closed allowing the secretion to be released as required.

The secretion runs down a groove in the mandible.

Function in the mouth form a white secretion containing 2- heptanone which acts as an alarm pheromone and 10 hydroxyl-2-deconic acid (10 HDA) which is the principal fatty acid in brood food and royal jelly and acts as a preservative. The function of the gland changes with the age of the bee and the duties it is undertaking. 2- heptanone is not found in the secretion of very young bees. Only as they start foraging does the pheromone appear i.e. after nurse duties.

Function in the Q: produces queen substance, the main components being

9-oxo-2-deconic acid (attracts drone for mating)

9-hydroxyl-2-deconic acid (holds swarms together)

Inside the hive Q, substance inhibits the building of Q, cell inhibits the development of the workers ovaries and the workers are attracted to the queen.

BUZZ-BOARD

Good night bees. Before you tuck them in for a well earned winter rest: Check for laying queens plenty of time to feed but busy. Disease check should be standard practice. Make sure they have adequate stores before time to feed but busy. Check roof and floor boards check can be a problem if allowed in. Finally close the gate and keep the big intruders out, leave undisturbed checking only at a distance, vibration outside the hives will disturb them leading to the unnecessary consumption of valuable winter stores.

Congrats to Mary Ryan on completion of her Senior Exams. Well done and best of luck in your Lecture exam. We will have the opportunity to hear Mary speak during our lecture series next season.

Winter lectures will recommence on October 12th and November 9th

Beekeeper of the year Congrats to Jim Power who was awarded the title.

New venue Raheen House Hotel. We are moving. Our new venue for lectures and meetings will be at Raheen House Hotel. To get there from Clonmel town you cross the gas house bridge turn right at round about and it's the first entrance on the left. See you there

Text alert Do you have a mobile phone and are you getting STBA text alert if not contact me for inclusion in our list.

Our AGM will be on Dec 7th in Raheen house hotel. Be there to support your association and express your opinions. We will have a mini lecture also on the night.

Microscope experts: if you want one well we have several. Congrats to Liz, Irene, Mary, Gerry, David and Jim. They all passed their practical exam on the use of the microscope, disease and pollen identification.

Preliminary and Intermediate exam congrats to all our beginners who did well in their exam also John Kelly who passed his intermediate exam.



BABYBEE
Who is guiding BabyBee
What will she ask
What will she see
Do they eat Kiwi
Or down a cup of tea
Do they waggle
Will they dance
On the frame of romance
They come, they go
As does the honey flow
BabyBee do you know
Will he remember me



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