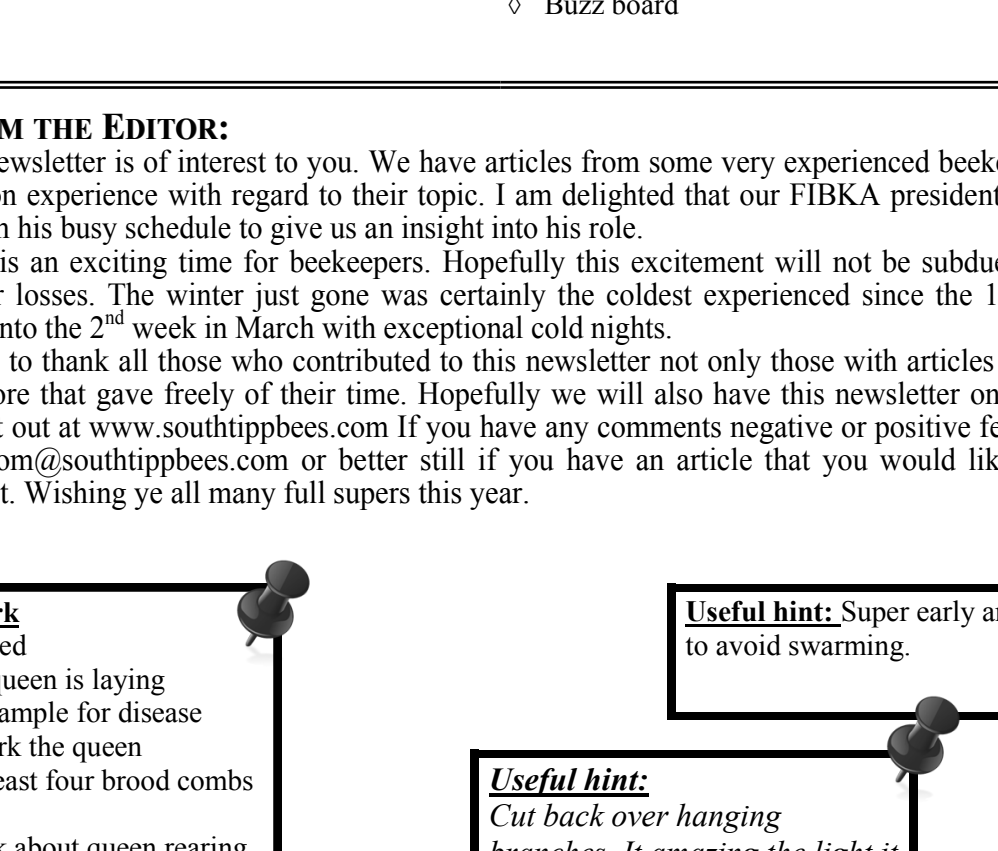


# South Tipperary Beekeepers Association

## Newsletter April 2010



- Editor's Notes
- Association News
- Hints for Beginners
- A word from the President
- To Be or not to Bee
- A little bit of Science
- Simple Increase
- Might your mites be resistant
- Preparing for the honey show
- Poem The Beekeeper
- Buzz board

**NOTE FROM THE EDITOR:**  
I hope this newsletter is of interest to you. We have articles from some very experienced beekeepers all with hands on experience with regard to their topic. I am delighted that our FIBKA president took the time out from his busy schedule to give us an insight into his role.  
Spring time is an exciting time for beekeepers. Hopefully this excitement will not be subdued due to heavy winter losses. The winter just gone was certainly the coldest experienced since the 1980s and now we are into the 2<sup>nd</sup> week in March with exceptional cold nights.  
I would like to thank all those who contributed to this newsletter not only those with articles but there are many more that gave freely of their time. Hopefully we will also have this newsletter on our web site. Check it out at [www.southtipper.com](http://www.southtipper.com) If you have any comments negative or positive feel free to forward to [tom@southtipper.com](mailto:tom@southtipper.com) or better still if you have an article that you would like printed please submit. Wishing ye all many full supers this year.

**Spring Work**  
Feed if needed  
Check that queen is laying  
Check and sample for disease  
Clip and mark the queen  
Replace at least four brood combs  
Super early  
Start to think about queen rearing

**Useful hint:**  
Super early and often to avoid swarming!

**Useful hint:**  
Cut back over hanging branches. It amazing the light it allows onto the hives.

**Useful hints:** During the active season a good beekeeper will always have spare queen ready to use

**ASSOCIATION NEWS**  
As usual the activities are many with no time for clustering. We had a very successful AGM and two speakers for that night. Early January we had our annual dinner which was a great night. Members who attended our lectures were treated to very good speakers. The study group is back in full swing. Our beginners' classes have 25 members a fantastic boost to the association. Outdoor group starts in late April. The web site is proving a major attraction with approximately ninety new visitors a month with several returning. If you are willing to help with any of the activities let us know.  
We would like to see more members attending lectures. The outdoor demonstrations are a fantastic way to update your knowledge.

**HELP FOR BEGINNERS . . .**  
**"The Prevention and Control of Swarming" Tom Prendergast**  
Swarming to the beginner can be a major source of frustration and the stumbling block in their quest for a crop of honey. It is not easy to control a large colony that is intent on swarming unless you understand the basics of the 14 and 9 day examination. The best way to understand it is to attend our outdoor demonstrations.

There are no problems if the colony is not preparing to swarm but what does the beginner do if they find queen cells and more often than not the queen is not marked or clipped.  
Understanding why the bees swarm and how to prevent the initiation of it is extremely important.

Annual population cycle show a very rapid increase in adult bee population from the beginning of April. It is not long providing the weather is fine the Brood box starts to fill up with both brood and bees and if nothing is done there will be insufficient room for the emerging bees. Additional space is provided by adding supers, usually 1 at the time as the colony build up. Therefore supers are for bees and if the colony is adding up all the incoming nectar coming will be stored in the super, being used solely as a parking place for late April. The web site is proving a major attraction with approximately ninety new visitors a month with several returning. If you are willing to help with any of the activities let us know.  
We would like to see more members attending lectures. The outdoor demonstrations are a fantastic way to update your knowledge.

**Large area of combs is required for the ripening of nectar to honey so that the nectar/honey can be hung up to dry. The change of nectar (30% sugar) to honey (80% sugar) is approx 100:30 this requiring 3.3 times more space for nectar compared to honey ready for scaling.**  
There are two principles involved in supering  
1. To provide space for bees  
2. To provide space for nectar ripening.

Other relevant points  
Add an extra super when all but the two outside frames are full of bees in the top super or initially in the Brood box  
It is better to super early in the spring and be somewhat slower in July when the main honey flow is on.  
Top super is the most popular, use bottom supering if using foundation.  
Excuser is a personal option.

**The importance of supering as a factor in swarm prevention**  
The most important factor which causes swarming is the lack of an adequate threshold level of queen substance throughout the whole colony which is discovered and proved by a series of experiments by Dr. C. Butler in Rothamsted in the 1950s. However it is known by observation but not proven that other factors play a part in swarming namely:  
⇒ Season  
⇒ Shade  
⇒ State of flow  
⇒ Strain of bees  
⇒ Manipulation  
⇒ Weather  
⇒ District  
⇒ Comb space for queen  
⇒ Comb space for nectar honey.

Considering the two principles of supering (room for bees and nectar ripening) it is clear that by providing extra supers not only are the two conditions relieved but ventilation is also improved. Supers provide room for nectar storage freeing up the brood chamber for egg laying. The most important factor is the prevention of congestion within the hive and the efficient distribution of queen substance, young queens providing the greater levels. The strain of bees is an important factor, some swarming more than others.  
Season, shade, weather, flow all seem to play a part in swarming.

To prevent the loss of the bees the beginner can make up an artificial swarm. Basically you are separating the queen and foragers from the brood and nurse bees. Extra equipment is needed and it can be used as a means of expanding the number of colonies you have. There are several variations to this method but only a straight forward version is given here.

**Making up an artificial swarm without finding the queen.**  
This can be done if you rely on two facts:  
1. If you put all the bees into a box the queen must be in it also.  
2. Young worker bees will always be attracted to brood.

When Queen cell are found during routine examination action to produce an Artificial. swarm should be taken.  
• Move brood chamber and floor to about 600 mm away from original swarm.  
• Place new brood chamber on old strand with empty frame of comb or foundation.  
• Select 1 open queen cell well nourished and mark frame with drawing pin – brush all bees into new brood chamber. Shake all remaining frame into new brood chamber and destroy q cell.  
• Brush bees from sides of brood box and floor board into new brood chamber.  
• Put 1 frame of brood into new brood chamber (check for Queen Cells first and remove if any.)  
• Now all bees and Queen should be in new brood chamber.  
• Place frame with marked Queen cell into old brood chamber

Then re assemble the hive as follows from the top  
• Roof on top  
• Brood chamber with old frames and their brood, 1 frame of foundation 1 Q cell, no bees  
• Super if present  
• Queen excluder  
• Brood chamber with 1 frame & Brood and foundation all the bees including Queen  
• Floor board underneath  
Reassemble on original stand

Next day the whole lot overnight when the nurse bees will move up to the brood to keep their warm and feed. Change that you will weaken the colony so much that it will not recover for this years honey flow. So you can take the frames of stores and pollen from two other strong, disease free hives in the apiary; only take the brood and bees from the swarming colony. You must remember that this hive will not have a laying queen for the next three weeks. If this is carried out in May when the new queen is hatched you can give a frame or two of sealed brood from other hives in the apiary. This has a two fold benefit: firstly, it will build up the colony that has no laying queen and secondly it will bring the new queen into lay sooner. It will also weaken the stronger colony delaying problems with swarming. It will give you the opportunity to introduce frames of foundations satisfying the colonies needs to draw wax. If on the other hand the colony starts swarming in mid-June you can take your complete nucleus from the swarming colony. This should curtail their swarming impulse and you can be assured that there will be no decrease in our honey returns, as any egg laid after the 15<sup>th</sup> June will not gather honey for you this season (Three weeks from egg to hatching and three weeks from hatching to foraging).

Returning to the nucleus, it should be taken three miles from the original apiary and not placed in the vicinity of full colonies as it is susceptible to robbing, due to its weak status. If it requires feeding, it is better to take frames of stores from strong colonies and feed these colonies as they would be in a better position to defend their home. If the queen in this colony is only one year old she will be suitable to head this colony into the winter. If she is more than one year old it would be better to replace her with a new queen, never allow a nucleus to raise its own queen.

**Note from the editor:** Now you have the theory why not come along to our outdoor demonstrations where Redmond will be demonstrating all of the above and lots more. Check website for details

**A LITTLE BIT OF SCIENCE WHAT IS PHOTOSYNTHESIS?**  
Photosynthesis is the process by which plants, some bacteria, and some protists use the energy from sunlight to produce sugar, which cellular respiration converts into ATP the "fuel" for all living things. The conversion of unusable sunlight energy into usable chemical energy, is associated with tactions of the green pigment chlorophyll. Most of the time, the photosynthetic process uses water and releases the oxygen that we absolutely must have to stay alive. Oh yes, we need the food as well!  
We can write the overall reaction of this process as:  
 $6H_2O + 6CO_2 \rightarrow C_6H_{12}O_6 + 6O_2$

So the above chemical equation translates as: **six molecules of water plus six molecules of carbon dioxide produce one molecule of sugar plus six molecules of oxygen**

**Hydrolysis of polysaccharides**

Sucrose. The glycoside bond is represented by the central oxygen atom which holds the two monosaccharide units together.  
Polysaccharides, monosaccharide molecules are linked together by a glycosidic bond. This bond can be cleaved by hydrolysis to yield monosaccharides. The best known disaccharide is sucrose (table sugar). Hydrolysis of sucrose yields glucose and fructose. There are many enzymes which speed up the hydrolysis of polysaccharides. Invertase is used industrially to hydrolyze sucrose to so-called invert sugar. Invertase is an example of a glycoside hydrolase (glycosidase).

**SIMPLE INCREASE**  
By Redmond Williams  
Now, that we are suffering an increased incidence of winter losses caused by many reasons ranging from poor queen mating due to the unfavorable summers of the past three years, the increased effects of Varroa and the viruses they carry, or poor apiany management by the beekeeper. We all need to produce more nuclei and full colonies to replace losses. The literature provides numerous ways of producing nuclei and full colonies from the artificial swarm to the Vince Cook method of nucleus production. However, both of these require a lot of effort and extra equipment. Thomas asked me to talk about simple increasing.

Firstly, when you are doing you regular swarm control inspections during the summer you can make up nuclei by using the following method:  
1. All queens must be clipped and marked. This is the basis for good swarm control.  
2. Having found that your colony has started swarm preparations, i.e. unsealed queen cells. I would break them down for the first time.  
3. Return after nine days and check again.  
If the colony has raised further cells; find the queen, one of the advantages of clipping and marking, and take her out in a three frame nucleus consisting of one frame of brood, stores and pollen respectively.

This method is time dependant and it is better to perform during June. If it is carried out in May, there is a chance that you will weaken the colony so much that it will not recover for this years honey flow. So you can take the frames of stores and pollen from two other strong, disease free hives in the apiary; only take the brood and bees from the swarming colony. You must remember that this hive will not have a laying queen for the next three weeks. If this is carried out in May when the new queen is hatched you can give a frame or two of sealed brood from other hives in the apiary. This has a two fold benefit: firstly, it will build up the colony that has no laying queen and secondly it will bring the new queen into lay sooner. It will also weaken the stronger colony delaying problems with swarming. It will give you the opportunity to introduce frames of foundations satisfying the colonies needs to draw wax. If on the other hand the colony starts swarming in mid-June you can take your complete nucleus from the swarming colony. This should curtail their swarming impulse and you can be assured that there will be no decrease in our honey returns, as any egg laid after the 15<sup>th</sup> June will not gather honey for you this season (Three weeks from egg to hatching and three weeks from hatching to foraging).

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**Note from the editor:** Just like the author I would like to point out that the use of Oxalic acid on your bees is illegal in Ireland. At present it is being used in test apiaries only. However it is important that we understand and are ready with alternatives when resistance is discovered

**PREPARING HONEY FOR SHOW**  
By Jim Power  
The various ways to present honey for sale and showing are: run honey in various colours, i.e. light, medium and dark, naturally granulated and soft set also heater honey. It is best to have the various grades selected, labelled and stored separately in their own class in food grade containers during extraction, also the other popular ways are comb honey, i.e. a frame fit for extraction, sections cut comb and chunk honey. Select a clean environment preferable a purpose honey house or room, for most operations or for private use where it may not justify building a purpose built set up one may use the kitchen but be warned it will cause aggravation with the other half.

**The essentials for preparing honey are:** a high standard of hygiene and cleanliness, a method of heating honey to 42°C, ideally a thermostatically controlled cabinet or a thermostatically controlled type of straining boiler, a settling tank with a honey valve or a food grade bucket with a honey valve, a nylon organza filtering cloth also clean honey jars and lids.  
Always use the oldest honeys first. To prepare run honey for showing first place a bucket of honey into the heating cabinet with the thermostat set at 40°C for a period of 48 hrs., after 48 hours remove organza straining cloth to settling tank to allow honey to return to a future 24 hours in order to clear, bubbles will rise to the surface and the honey should clear. The object of straining is to remove any solid and foreign objects from the honey of which there are three types, those that sink to the bottom those that float and those that remain suspended.

**When bottling honey,** first put the settling tank up to eye level whether sitting or standing. Always sit as this takes the weight off the feet, hold the jar at an angle so that the honey will run down the side of the jar to avoid bubbles forming, never use the first or last few jars bottled for shows, always fill above the required level as this leaves scope for skimming the surface after leaving to settle maybe in the conservatory, on the sill to take advantage of the sun, remember to turn occasionally the skim with the back of a spoon, fit lid immediately. Younger or fresher honeys always give off a better aroma, keep lid closed as this keep in the fresh aroma also honey is hygroscopic meaning that honey will absorb moisture if not kept sealed and raise the moisture content ideally depending on the honey, should be kept as close as possible to 17 % moisture content, lighter honeys generally have a higher content i.e. clover honey can be up 23% moisture, any honey should not be above this as this leads to fermentation.

**Faults to be avoided** when showing honey: partially granulated or insipid honey, fermented honey, ununiformity of jars and lids, dirty or reused jars and lids, discoloured liquids, incorrectly labelled entries, particles in honey, scum on surface of honey, bubbles and being under weight. Everything being passed so far the judges will be looking for clarity and brightness, good viscosity, a nice flavour or fragrance and a nice taste. I suppose a lot of the faults are generated by extracting unripe honey.

**Entering** for any show one should always read and re-read the schedule first and conform to same, another important check is to make sure that the honey is entered in the right colour class and all the jars are the same colour, if you are not sure ask the show secretary to check with his or her grading classes.

**Spring Work**

**Enough for now,** this should be enough to get the beginner entering honey to his or her first show, at another time we will progress maybe to comb honey and greater heights maybe we will have a greater number of entrants at the Clonmel honey show this year. Entering honey competitively is a great way to up the standards. Be seeing you there.

**THE BEEKEEPER** By Breda Joyce  
Over the winter months  
The beekeeper catches up,  
Searches out each nuc and frame,  
Repairs and cleans,  
Stays ahead of the game.  
He sniffs the pollen in the air  
The whiff of nectar already there.  
The hum, the drone,  
The prospect of a swarm  
On a swifter's morn.  
Armed with the tools of his trade:  
Smoker, hive tool, bee veil, gloves,  
Like an astronaut bound for the apary,  
He is doing the one thing he loves.  
The hauling of supers is no easy task;  
A good year will test his back.  
Brood chamber checked,  
Moose guard in place,  
A smile spreads across his face.

**BUZZ BOARD**  
Honey Show in September 25 and 26<sup>th</sup>  
**Out door demos to include**  
Queen rearing  
Nuc Production  
Swarm Control  
Bailey frame change  
Starting in Cahir 19<sup>th</sup> April  
Starting in Clonmel 27<sup>th</sup> April  
Wanted, Interesting articles for our newsletter  
Next edition September 2010