THE ESSEX BEEKEEPER

WAX DAY AT COLCHESTER DIVISION

Monthly Magazine of the E.B.K.A

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Registered Charity number 1031419

Essex Beekeeper's Association

The Essex Beekeepers' Association is a registered charity whose object is to further the craft of beekeeping in Essex.

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Please ensure that all material for publication is received by the Editor before the beginning of the preceding month to publication.

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January and February 2009

Braintree	*30 Jan Friday* 8pm AGM. “AGM” Constitutional Club, Great Square, Braintree. *27 Feb Friday* 8pm. “Speaker Constitutional Club, Great Square, Braintree.
Chelmsford	*19 Jan. Monday* 7.30pm AGM
Colchester	*29 Jan. Thursday* 7.30pm AGM. Langham Community Centre. *8 Feb. Sunday* 2.30pm Snowdrop tea at the gardens of Sally and Julian Hepher, tel 01206 251970.
DH & Maldon	*24 Jan. Saturday* 2.00pm AGM Mundon Victory Hall, Main Rd, Mundon CM9 6PB.
Epping Forest	*15 Jan. Thursday* 7.30pm AGM at Chingford Horticultural Hall. *19 Feb Thursday* 7.30pm. Opening Hives in Spring.
Harlow	No details submitted
Romford+	*9 Jan. Friday* 8pm AGM. *6 Feb Friday* 8pm. "What's in Your Tool Box?" Led by Jim McNeill
Saffron Walden	*23 Jan. Friday* 7.15pm Annual Dinner and AGM Dunmow Day Centre, Gt Dunmow, CM6 1AE
Southend	*28 Jan. Wednesday* 7.30pm AGM W.I. Hall, Bellingham Lane, Rayleigh. *BBKA Module 3* Margaret Thomas will be running a module 3 course on the 7th, 14th, 21st January and 4th, 11th, 18th Feb in the Annex at Hawkwell Village Hall. 7.30pm start. Fee £15.00

ESSEX BEEKEEPERS ASSOCIATION
Annual General Meeting

Essex Beekeepers' Association: 129th Annual General Meeting
Saturday 28th February 2009, at 2pm
Venue: Room E06, Writtle College, Chelmsford.

Speaker and topic to be confirmed. Refreshments provided.

All posts are up for re-election, so don't be shy, come and join the team! If you want to know what a post entails, then please contact the current post-holder or the CEC Chairman, Pat Allen, on 01708 220897 or chair@ebka.org.
More details next month.

Talk by Willie Robson To Colchester Division

Concerning Chain Bridge Honey Farm in Horncliffe, Berwick upon Tweed, Northumberland, TD15 2XT. http://chainbridgehoney.co.uk

Willie Robson rarely leaves his Northumberland home so members Colchester Division are very fortunate that when he did venture south he included a talk to local beekeepers on his itinerary.

Willie described how he came to take over Chain Bridge Honey Farm from his father who founded the business soon after the end of World War II.

The farm now employs 18 people, 9 working full time, managing around 1800 hives and packing honey. Willie's wife and daughters use honey and beeswax to produce a range of soaps and cosmetics as well as honey mustard and furniture polish.

Willie's son Stephen is now involved in managing the bees and making equipment. Thuya is a lightweight timber, resistant to decay like cedar, it is produced in Norfolk. At Chain Bridge Honey Farm Thuya is used to make the Smith hives in which the bees are housed at the many apiary sites located around the Berwick area.

The bees are all of local strain which Willie feels is well adapted to the local conditions. Italian bees and other imports might be more susceptible to disease in the cold climate.

Hives are moved three times during the year. At the winter apiary sites Willie likes the hives to catch any winter sunshine to enable the bees to make cleansing flights whenever possible. He also likes them protected from the harshest winds and with good sources of early pollen nearby. In spring the hives are moved out to fields of rape and other crops. At these sites some shade from the sun will reduce swarming and absconding. Willie doesn't rush to remove rape honey as he has equipment to deal with it when set on the comb without overheating. This allows the bees to forage on a range of other nectars, including bean and phacaelia, which results in a good flavoured Tweedside honey. This practice also insures that there is no chance of bees starving at any time in early summer if there is no good nectar source available.

When the supers are removed in July Willie likes to clear them using essential oil if the weather is warm, or using clearer boards if its cooler. He would never use a bee blower. By the 1st August the hives are moved to the heather moors to produce the unique honey much of which is packed for sale on the comb.

After removal of the heather honey supers the hives are returned to winter sites. Willie no longer feeds bees with sugar syrup but provides candy feed in plastic lunch boxes on every hive. These are replaced as necessary during the winter.

Willie showed us a selection of Chain Bridge Farm products which are sold at their visitor centre and on-line. The labels have all been redesigned recently and do not appear yet on the website. The jar labels all have a bold coloured panel to distinguish the different types of honey. Chain Bridge honey is on sale in 350 shops, mainly in Scotland and the North of England.

Willie was already known to several beekeepers in the audience and the rest of us are very pleased to learn that a commercial beekeeper makes the well-being of his bees his highest priority.

Thanks to Ian and Sue Milligan for providing overnight accommodation and showing them around our region the next day.

Lydia Geddes

Tales from the Hive

Beekeepers, when they meet, tend to discuss many aspects of caring for their bees. Also they will generally have an amusing tale to tell concerning events which happened when they visited their hives. This new section will hopefully manage to re-tell some of those tales.

Dave Hill has this contribution

Years ago I applied to take the BBKA's Preliminary Examination. Candidates at that level had to demonstrate a working knowledge in the apiary plus familiarity with common items of beekeeping equipment. Miss Avey was to be my examiner and we arranged to meet in the teaching apiary in Cow Watering Lane.

I had two stocks of Taylor's Italian strain bees and had been quite comfortable working them bare-handed. Consequently I turned up at the apiary in an old shirt converted to velcro fastening down the front with elasticated short sleeves. A Taylor's combination hat and veil completed the rig. Miss Avey wore a skirt and blouse, stockings and walking shoes. We ambled over to the apiary where she glanced at me and asked "You alright like that?" Encouraged by her own casual outfit I said I was. "Right" she said, clapped an ancient hat and veil on her head and pointed a finger at the biggest brood chamber I had ever seen. "We'll do that one!"

"Just go through it frame by frame and tell me what you see." Everything went fine and I was gaining confidence with each frame until we got just past the middle. Then the bees decided they had had enough and launched a concerted and painful attack on my hands. I was determined to show I could cope and said nothing. To my surprise she said nothing either, standing placidly by the hive with her hands folded over her tum and asking the occasional question. I don't believe she collected a single sting. Anywhere. Reaching the last frame I boxed up and we walked back to the car park. By then my hands were badly swollen and my heart sank when she asked me to assemble and wire a frame. My hands were so swollen I had difficulty holding the parts and anyway had never put that type of frame together before. She observed that I was not doing very well and I showed her my hands. "Oh, my goodness" she exclaimed with genuine surprise, "I had no idea. You should have said!" Evidently she had been so absorbed in question and answer and her own observations that the eruption of the stock had simply escaped her notice. "Never mind. That will do for today and you did well in the apiary. I'm not supposed to tell you in advance but I'm sure you'd like to know I'm going to pass you!" Suddenly my hands felt less painful.

Not long afterwards at a beekeeping event, still flushed with success, I related this tale of conquered adversity to a very experienced beekeeper. He nodded, "Ah, but she still passed you didn't she?" Then, taking all the wind out of my sails with a knowing smile, "She passes everyone!"

Derek Webber has "An Interesting Break"

We were about half way through the evening instruction session. All was going well, the students were coping well and everything was under control. The apiary site was in an orchard and the headland sufficiently wide to allow space for a good apiary site. Suddenly one member noticed a swarm in one of the apple trees. I went to the car to get a hive with a full set of frames fitted with foundation and by the time I returned to the swarm all the students had gathered around it.

The swarm was in an ideal spot on the tree for the empty hive to fit under the cluster and it fell into the hive perfectly. This was an ideal situation to show everyone how to hive a swarm. The bees started to fan almost immediately and the flying bees were soon joining the ones in the hive. Suddenly one of the group alerted us to the fact that a queen bee had landed on the shoulder of one of the students but before it could be captured it took to the air again. Nothing could be done about it so we turned our attention to the swarm in their new home. Almost immediately someone spotted a queen landing on the same shoulder of the same person and in exactly the same place. Quick action caught her and I placed her in a matchbox in my car. On returning to the group at the swarm it soon became apparent that the bees in the box were becoming restless and soon started to come out of the box. This confirmed in my mind that the queen in the car was the one belonging to the swarm. I quickly ran to the car and retrieved the matchbox. After opening the tray to about three millimetres I placed the box between two frames and closed the hive down allowing only an entrance through the feeder hole in the crown board. The bees quickly reversed their movements and returned to the hive and settled down. The person who spotted the swarm was in need of one so we strapped the box up at the end of the evening he took it home with him and it became a very successful colony.

It was a fascinating event but the thing that stayed in my mind most was the very limited amount of time it took the bees to detect the absence of the queen. This is also true when the queen is removed during certain manipulations. It wasn't food sharing or fanning. Then what was it?

Local News

Wax Day for beekeepers not desperate housewives!

Colchester division held their wax day at Roger and Penny Barker's house on Saturday 25 October 2008. When we arrived two small boilers were on the go--one to melt the cleaned wax; the other to melt and clean the wax brought by members on the day. Tea and coffee awaited those who wanted a leisurely start but there was a distinct air of purpose: those candles had to be made! 15 people arrived shortly after 11.00. Candle-making was the first choice for everyone-- a queue quickly formed to dip ones' wick! Martin Frostick gave up his day of candle-making to ensure that there was a plentiful supply of clean wax for everyone to use--thank you Martin. Penny had a wax exchange scheme: our partially cleaned wax was weighed on arrival and on departure our produce was weighed and we paid for the excess wax taken away. We arrived with nearly a kilo of wax and the days work resulted in almost two kilos of candles (a mere dozen twelve-inchers) were brought home.

Candle-makers adopted a variety of styles: there was the double dipper; the quick and often dipper; the long, slow dipper. There were two schools of thought on whether to roll or not for the quality of straightness. Finally there was the unique action of the beekeeper who recommended to 'tug' one's candle for straightness and then softly stroke it for that extra shine (she shall remain nameless!).

There was a large selection of moulds. Deep in this box a particular mould--it was shiny and black-- had been greatly admired. It generated a near unhealthy interest from certain quarters, wondering how much wax was needed to fill such a beast. Alas, by the time we left it had remained unfilled.

A delightful lunch was served by Penny of homemade soup and bread which tempted the dippers to a break from their activities but they were soon back thickening their candles. Roger had made available his wax foundation equipment. He gave a demonstration of how he makes his foundation without metal strengtheners. I noticed that a few candles were made from this rolled foundation. Many thanks for a great day must be extended to Penny and Roger. **Howard Gilbert**

Why do we need a ‘best before’ date on our honey?

When the subject of European Union regulation is raised amongst beekeepers a groan is frequently the next utterance. The requirement to have on each jar of honey a ‘best before’ date is a case in point. When this matter is raised you can generally guarantee to be told that someone has tasted a jar of honey that was at least several years old and tastes as good as the day it was bottled and therefore this regulation is pointless. The point regarding taste is valid but the honey regulations lay down specifications that honey must meet: so honey extracted ten years ago might now no longer be honey as defined by the Regulations.

The Honey Regulations 2003, which came into force on 25 September 2003 in England, implement the provisions of EC Directive 2001/110 relating to honey. The Honey (Amendment) (England) Regulations 2005 do not alter the provisions of the 2003 Regulations other than to correct a few errors, the only relevant correction in respect to this article is to add the reserved description ‘pressed honey’ to the list of specified honey products.

Honey does not need a list of ingredients because it is a single ingredient food. Schedule 1 of the Regulation defines the various honey products. A label on a jar which uses the word ‘honey’ can only contain blossom or nectar honey (honey obtained from the nectar of plants), honeydew (honey obtained mainly from excretions of plant sucking insects, *Hemiptera*, on the living part of plants or secretions of living parts of plants) and harvested as drained honey (honey obtained by draining de-capped broodless combs), pressed honey (honey obtained by pressing broodless combs with or without the application of moderate heat not exceeding 45℃) or extracted honey (honey ob tained by centrifuging de-capped broodless combs).

Schedule 2 provides the detailed specifications with which honey must comply. The Schedule provides specifications in respect of the following criteria:

sugar content (including content of sucrose, fructose and glucose);
moisture content,
water-insoluble content,
electrical conductivity,
free acid,
diastase activity and hydroxymethylfurfural (HMF) content.

Schedule 2 also provides general quality criteria for honey. Honey that is sold as such must not:
have any foreign tastes or odours,
have begun to ferment,
have an artificially changed acidity,
have been heated in such a way that the natural enzymes have been either destroyed or significantly inactivated.
In addition, no pollen or constituent particular to honey may be removed except where this is unavoidable in the removal of foreign inorganic or organic matter.

Having laid out the structure of the Honey Regulations I can now focus on some of the reasons why a 'best before' date is necessary: a) the specification as to the diastase activity and b) the specification of the HMF content.

a) The diastase activity, on the Schade scale, must not be less than 8 (this figure represents the rate at which the diastase in honey breaks down starch) with certain exemptions granted to honeys with low natural enzyme content (honeys with low natural enzyme content (e.g. citrus honeys) which have an HMF content of not more than 15mg/kg is permitted to have a diastase activity of not less than 3). Diastase is one of the five enzymes found in honey (the other four are invertase, glucose oxidase, acid phosphatise and catalase). This enzyme facilitates conversion of starch to maltose and is added by bees during honey production. The activity of diastase in honey is affected by storage and is sensitive to temperature increase and can thus be used as an indicator of storage time/freshness and controls during processing of the honey. The presence or lack of it is often used to assess the quality of honey or its heating history.

I could find very little research on the diastase level of freshly extracted honey. However the First European Conference of Apidology, Udine 19-23 September 2004, a symposium organized by Livia Persano Oddo and Werner von der Ohe, revealed some relevant statistics. In a report on the honey quality parameters in Slovakian honey of 244 samples of *marketed* honey, from which 193 belonged to multifloral honeys, 24 to unifloral acacia honeys and 27 to honeydew honeys. Average values (min-max) for diastase activity was 16.63 (8.6-33.75) Schade unit. In another report from the same conference the diastase level of honey produced in Turkey showed that the diastase level was 23.43 from sunflower honey, 29.4 from pine honey and 10.9 from orange honey.

The effect of temperature on the diastase level is as follows. The measure is the enzyme half life (the time for one half of enzyme activity to disappear).

68℉ (20℃)—1,480 days
86℉ (30℃)—200 days
104℉ (40℃)—31 days
122℉ (50℃)—5.38 days
140℉ (60℃)—1.05 days
158℉ (70℃))—5.3 hours
176℉ (80℃)—1.2 hours

So with the average diastase level for Slovakian *marketed* honey being 16.63, if an average sample was heated for 1.2 hours at 80℃ then the diastase level would be 8.315—just above the Honey regulations limit if this sample was English honey. Similarly if such a sample was stored at 20℃ for 1480 days (just over four years) the diastase level would again be 8.315. Thus it can be appreciated that honey stored for a period of time at room temperature might fall below the diastase level required under the Honey Regulations. For example, if the specific sample of the Slovakian honey with the diastase activity of 8.6 was left on the shelf at 20℃ it would only remain within the diastase limit for just under seven months. *Cont page 11*

b) HMF content The Honeybee Regulation 2003 requires the HMF hydroxymethylfurfural content of honey from England (which has not been blended with honey from tropical climates) to be not more than 40mg/kg. HMF occurrence in honey has been used for many years as an indicator of adulteration with invert sugars.

The first point to make is that the HMF content in honey varies widely depending upon the source of the honey and its fructose level. New honey contains 1 to 9 mg/kg of HMF depending upon the fructose content of the honey and the climate of where it is produced.

Relying on the data taken from the First European Conference of Apidology the HMF content of the Slovakian marketed honey had an average value of 1.79. In the other report from the same conference the HMF content of honey produced in Turkey showed that the HMF level was 2.17 mg/kg from sunflower honey, 5.45 mg/kg from pine honey and 3.77mg/kg from orange honey. Clearly all these honeys are easily within the limit set down by the Regulation 2003 if these honey samples originated in England. The issue is the relationship between temperature and the rate of increase in HMF content.

In a test carried out samples of honey were heated for 24 hours and the increase in HMF content was noted:

Temp.	Pine	Orange	Thymus
Unheated	1.2	2.25	8.78
35C	1.95	3.45	10.78
45C	2.25	3.75	13.17
55C	4.8	4.35	23.95
65C	12.4	19	48.2
75C	43.4	63	191.35

This table illustrates the difficulty in reaching specific conclusions on the HMF content of honey generally because honey samples all have different naturally occurring levels of HMF. The reaction to heat will produce different levels of HMF depending upon the fructose content of each sample. However, as a rough rule of thumb it has been suggested that honey stored at 20℃ will raise the HMF content by 1mg/kg per month. So if it is assumed that the HMF content of your honey is 5mg/kg then it will be within the Honey Regulations limit for 35 months. A very crude approximation. I found a table where it had been calculated the time it would take to raise the HMF content by 30mg/kg—useful inasmuch HMF will be present in all honey.

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From page 11

Time to produce 30 parts per million HMF (i.e. 30mg/kg HMF)

Temp.	Time
30C	150-250 days
40C	20-50 days
50C	4.5--9 days
60C	1--2.5 days
70C	5--14 hours

In conclusion the best before date on honey is relevant when considered in the light of the specifications laid out in the Honey Regulations. Honey samples are not homogeneous and so this makes it difficult to generalise as to the condition of each sample against the specifications. It must be remembered that both the HMF and diastase specifications must be met. But without a laboratory to test each sample of honey a general principle can still be followed. Honey should be stored in a cool place and should be used as close to the time of harvest as possible.

Sources:

1. First European Conference of Apidology, Udine 19-23 September 2004, a symposium organized by Livia Persano Oddo and Werner von der Ohe

2. Apiacta, 2001, 36 (4), 177 – 181 The Effect of heating on Honey: HMF and Invertase.

More photos of the wax day held by Colchester Division

The National Honey Show
Results obtained by E.B.K.A Members

Class 1: 24 jars of clear Honey—Highly Commended Mr James McNeill
Class 2: 2 Jars Gift Honey—Highly Commended Mrs Margaret Thomas
Class 33: 3 Non-moulded candles—Very Highly Commended Mrs Margaret Thomas
Class 82: 3 ornamental Candles—3rd Mrs Margaret Thomas
Class 84 Honey fruit Cake—Highly Commended Mrs Jennifer Johns

Essex Section

Class 181 One Comb for extraction—1st James McNeill, 2nd Mrs Pat Allen, 3rd Mr Ted Gradosielski, Very Highly Commended Mr Eric Fenner
Class 182 2 jars light Honey—1st Mrs Margaret Thomas, 2nd Mrs Jennifer Johns, 3rd Romford Division
Class 183 2 jars Medium Honey—1st Mrs Margaret Thomas, 2nd Romford Division, 3rd Mr Eric Fenner
Class 184 2 jars Dark Honey—1st Mr Eric Fenner, 2nd Mr Ted Gradosielski, 3rd Romford Division, Very highly commended Mr James McNeill
Class 185 3 jars different honey—1st Mr Ted Gradosielski, 2nd Mr James McNeill, 3rd Mr Eric Fenner, Very Highly Commended, Mrs Margaret Thomas
Class 186 2 jars set—1st Mr Ted Gradosielski, 2nd Mr James Mc Neill, 3rd Mrs Pat Allen, Very Highly Commended Romford Division
Class 189 One Jar Gift—1st Mr Eric Fenner, 2nd Romford Division, 3rd Mrs Pat Allen, Very Highly Commended Mr James Mc Neil
Class 190 1 Piece of Bees Wax—Very Highly Commended Mr Paul Abbott
Class 191 Three Bees Wax Candles made by moulding—1st Mrs Margaret Thomas
Class 192 Three Bees Wax Candles not made by moulding—1st Mrs Margaret Thomas
Class 193 Dry Mead—1st Mr Eric Fenner Class
Class 194 Sweet Mead—1st Mr James McNeill

London Bee Keepers

Class 241 2 jars light or medium honey 1st Mr James Mc Neill
Class 242 2 jars set 1st Mr James Mc Neill 2nd Mrs Pat Allen
Class 243 1 jar Liquid Honey Highly Commended Mr Terry Watson

Tremearne Cup Mr Ted Gradosielski(2 Jars set),

Dodd Cup Mrs Margaret Thomas (most points in Essex Section)

Jean Blaxland Memorial Mr James McNeill

ESSEX BEEKEEPERS ASSOCIATION
MINUTES OF THE EXTRAORDINARY GENERAL MEETING
held on Thursday 27th November 2008
in the Chapel of Youth, Trinity Methodist Halls, Chelmsford

These minutes will be considered correct if no objection is raised in writing before Saturday 28th February 2009. Any point challenged will be bought before the next meeting for correction of the record.

Chair	Derek Webber (President & Presiding Officer Colchester)
Also present:	Pat Allen (Chairman CEC, Membership Register), Richard Ridler (Treasurer), Richard Alabone (Chelmsford), Geoff Pears (Colchester), Jean Smye (DH & Maldon), Jenny Johns (Epping Forest), Penny Learmonth (Saffron Walden), Eric Fenner (Harlow), Dick Thomas (BBKA Delegate), Margaret Thomas (Minutes & Examinations), Eileen Marrable (Spray & Disease), Terry Watson (NHS), Howard Gilbert (new Editor The Essex Beekeeper), Roy Carter (CPRE & FWAG Delegate), Donald Earle (Chelmsford Member).
Apologies:	Ann Tillbrook, John Gracey (Epping Forest).

The business of the meeting was to approve the following changes to the Rules of the Association:

1 Rule 20b to read:
b) Remit to the General Treasurer capitation due to the county and to the BBKA:
by first April every year for all then current members;
by 1st September every year for members joining since the April capitation payment.
The BBKA register of members shall be used as the authoritative record of membership against which the remittance will be requested by the General Treasurer.

2 Additional rule for section 20:
g) Submit a list to the General Treasurer by 30th May every year of sums received which qualify for Gift Aid during the previous tax year.

Agreed nem con.

Meeting Closed.

ESSEX BEEKEEPERS ASSOCIATION
held on Thursday 27th November 2008
in the Chapel of Youth, Trinity Methodist Halls, Chelmsford

Report from the Central Executive Committee: November 2008

•Andy Wattam our RBI will be running a disease course in the north of the County in July – watch out for the date. His courses are always well attended and very interesting and relevant to the problems bees face.

•Our new Editor, Howard Gilbert, is looking for copy for the magazine. Do report any interesting happenings in your Division, with photographs please.

•Who has kept bees for longer than 50 years? Let your Trustee know so that the CEC can put them forward for the 'long service award' from the BBKA.

•Essex got a good share of prizes at the National Honey Show. Many thanks to Jim McNeill from Romford for transporting our exhibits.

•Various Divisions are running beginners classes. Colchester will be running a course on Module 5 (anatomy and physiology), and Southend Module 3 (pests and diseases). All members are welcome to any of these courses. Contact Derek Webber in Colchester 01206 271714, and Dave Blackwood in Southend 01702 207078.

•Many Divisions have difficulty finding places to recommend beginners keep their bees, especially in suburban areas. Anyone knowing of suitable locations, please contact their Divisional Secretary or Pat Allen who is currently acting as General Secretary on 01708 220897 or chair@ebka.org.

•The Essex AGM will be on the 28th of February 2009. **Put that date in your diary *now***.

BRAINTREE DIVISION ANNUAL DINNER

The Braintree Dinner has been postponed until Saturday, 28 March 2009.

Because of the increase in Braintree membership and limitation on the number that can be accommodated preference must be given to those members and others who are closely associated with Braintree. After that it will be a case of first come first served.

The cost will be £16 per head. Application should be made to the Braintree Treasurer, Stuart Mitso at 83 Challis Lane, Braintree, Essex CM7 1AL. Cheques should be made payable to EBKA (Braintree Division). Tickets will, not be issued.

The BBKA and Pesticides

From Cheshire Beekeeper December 2008

The practice of the BBKA of endorsing certain pesticide products as being “bee-friendly”, and receiving donations from the pharmaceutical companies in return, is again coming under attack.

The matter is on the agenda for the next Annual Delegates’ Meeting at Stoneleigh in January, and is therefore up for discussion at the next Committee meeting of the CBKA on December 6th. As usual the situation is far more complicated than some people with radical views would have us believe. I have been trying to sort out the wood from the trees, and I am sharing with you my findings so far. If I am wrong in anything I have stated, I would welcome a correction.

There is a lot of information (as usual, rather too much!) on the internet. Several links were sent out with the October E-News. I can supply website addresses to any member who requests them.

The latest criticism of the BBKA policy has arisen following scares to do with neo-nicotinoid pesticides, which have led to bee-deaths on the continent, and which are produced by Bayer – one of the firms from which BBKA receives donations.

There are two main neo-nicotinoids on the market in the UK – Imidacloprid (sold under various names: Gaucho, Admire, Confidor and Winner).and Clothianidin.

Clothianidin killed many colonies in South-west Germany this summer when it was used as a maize seed-dressing in a high concentration. The pesticide dust had not been fixed effectively to the seeds and blew off when they were sown, polluting the surrounding countryside. According to official figures, 11,500 colonies were damaged by this poisoning episode. As a result, the German Government suspended the registration of eight neo-nicotinoid pesticide seed-treatment products used for oilseed rape and maize.

Imidacloprid killed huge numbers of bees in France between 1996 and 2000, after which it was banned by the French Government for use on sunflowers. In Canada it is believed that clover and OSR crops have sub-lethal residues (picked up from the soil) of imidacloprid in the pollen and nectar which are causing the slow death of colonies. Imidacloprid is still legal in the USA, and is now apparently being used as a seed-dressing for sugar beet in the UK.

Earlier this year there was a scare caused by the allegation that beet-sugar (which you might use as a feed for your bees) was contaminated by neo-nicotinoid pesticides which had been applied to the beet crop. Many beekeepers went off in search of cane sugar, even though we have no guarantee (especially since cane sugar is produced in far-off countries) that this is any safer. “Ambrosia” is basically corn syrup, made from maize, which is one of the crops most heavily treated with pesticides, so that is just as likely to be contaminated.

The following statement by British Sugar would seem to clear up the matter.

"UK sugar beet is not sprayed with any neo-nicotinoid pesticide and none are approved for such use. Sugar-beet is not a flowering plant and hence does not attract bees. Neo-nicotinoid pesticides are approved for use in the protective seed-coating used to aid plant-germination and early growth. The coating degrades naturally in the soil and beet-plant, and is inactive by May when the plant becomes established.

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. Home-produced sugar is subject to a comprehensive residue testing programme and no neo-nicotinoid pesticides have been detected in British sugar. Therefore home-produced beet-sugar poses no risk to bees."
This all sounds quite plausible. Sugar beet can yield 50t/ha, and about 17% of that weight will end up as sugar. The amount of pesticide that can be applied to seed is infinitesimal compared with that sort of harvest volume. Studies have shown that only 0.1% of the imidacloprid applied as a seed dressing ends up in the root – where the sugar comes from.

I have compiled some facts about neo-nicotinoids.

Neo-nicotinoid pesticides are what are called "systemic", which means that they are absorbed into every cell of the plant, including, logically, nectar and pollen. The question is whether they would be present in a sufficient concentration to harm bees feeding on this nectar or pollen. No-one is supplying an impartial, reliable answer to this question at the moment.

Imidacloprid is a powerful neurotoxin, lethal to bees in doses as small as five parts per billion; at lower doses, it may not kill the bees outright, but is thought to lead to worker bees neglecting to feed larvae, and to a breakdown of the bees' navigational abilities – it is therefore thought by some to be a possible contributory factor in CCD.

Imidacloprid is persistent in plant cells and in the soil (half-life in soil under aerobic conditions of up to 3 years), where it kills all insects and earthworms, and it accumulates, season on season, until it reaches a 'stable' level, assumed by some authorities to be something like 10 parts per billion. It also rapidly contaminates ground water.

In a study undertaken as long ago as 1996, sugar beet plants sown from imidacloprid-treated seeds were tested for pesticide content in leaves and roots. 21 days after application a concentration of 15.2 micrograms per gram of fresh plant was found. 97 days after sowing this had fallen to 0.5 micro-grams per gram. In sugar-beet, which is not allowed to flower, these figures are unimportant. What they would mean in the nectar or pollen of a honey-bee forage-plant, however, I still can't tell. The plant metabolises the imidacloprid, and this metabolite is a more effective insecticide than the original compound, explaining the prolonged effectiveness against aphids—which is an attribute attractive to growers. (2)

According to a recent report, the remains of spray poisons have been found in 49% of the investigated fruit, vegetables and corn-products – representing an increase of 20% over the last five years. For the first time traces of imidacloprid were found in food for human consumption.(3)

The UK Pesticides Safety Directorate has issued the following statement.

We are aware of the concerns in some other Member States about the use of certain seed treatments containing clothianidin and imidacloprid. However, we are not aware of any problem in the UK related to any seed treatments and bees. There have not been any incidents reported to the Wildlife Incident Investigation Scheme (WIIS) to date which could be connected to the use of seed treatment. Given the vigilance of beekeepers, it is highly unlikely that had there been any incidents they would have gone unnoticed.

Of the three active substances which are mentioned, only imidacloprid is approved for treatment of oilseed rape seed and clothianidin for maize seed. This is the first year in which treatment of maize seed with clothianidin has been approved in the UK.

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We note that in the incidents in Germany the treatment was being used at a very high rate (125 g.a.s/ha) in an attempt to control Diabrotica. In the UK it is approved at a maximum rate of 60 g.a.s./ha on maize.

We will, of course, keep a close watch on the situation, but currently have no concerns that use of these products according to the conditions of approval will cause a risk to bees in the UK.

This statement is not as reassuring as it might sound. The fact that beekeepers have not reported a problem does not prove that a problem does not exist. It is very difficult for beekeepers (with our very limited resources) to identify the cause of a dwindling or loss of our bees, particularly when the amount of pesticide which could cause a problem would be of the magnitude of one microgram per 100g – that means one millionth of a gram per 1000 bees.

The BBKA does not endorse any neo-nicotinoid pesticide, but it has been criticised by some French and German beekeepers for not joining their associations in calls for a ban on neo-nicotinoids. The Greek BKA has just issued a call on all European beekeeping associations to press for a Europe-wide ban on these pesticides.

Mike Harris, general secretary of the British Bee Keepers Association, is quoted as saying: “Colony Collapse Disorder is caused by the varroa parasite. Pesticides are a separate problem - and in the UK, at least, neo-nicotinoids are not normally used in concentrations harmful to bees."

However, pesticides were under discussion at a recent symposium on CCD at the University of Warwick as a possible contributory factor in CCD. (1) It has to be said here that the pesticides most under suspicion are those used by beekeepers against varroa! However, the interaction (synergy) between various pesticides is still under consideration as a contributory factor.

The BBKA accepts donations from Bayer, Syngenta and other companies, totalling £13,000 per annum, no one company contributing more than £5000. Martin Smith, the BBKA Chairman, issued the following statement on the policy.

“The policy of the BBKA, established some years ago and endorsed by its membership at an Annual Delegates Meeting, is one of constructive engagement with such companies to ensure that the products are sold with the correct instructions to farmers in relation to when and how to spray to ensure that honey bees are not affected.

“Members of the BBKA Technical Committee meet the relevant companies periodically to ensure that we are aware of products coming onto the market, and discuss their possible effect on honey-bees. We review the products we already endorse in the light of any new evidence that may become available and ensure that the instructions to farmers remain pertinent. We also provide the companies with advice about the habits of honey-bees to assist in their formulation of new products.”

There are two strands to the question of the BBKA’s involvement with pharmaceutical companies.

1) Should the BBKA hold meetings with such companies, at which new products and their methods of use are discussed, leading to the BBKA either approving them as “bee-friendly” or withholding this approval? The BBKA says that, without the promise of an endorsement, there would be no incentive for the companies to meet with the BBKA, and we would then lose our leverage on them in terms of their marketing and usage instructions. *Cont. page 19*

2) Whether or not it holds discussions with such companies, should the BBKA accept donations from them? As with politicians, this can at least be seen to reduce the BBKA's independence, and lessen its voice in combating misuse/overuse of chemicals in the environment. STOP PRESS! I have just learned that the BBKA executive is proposing to the ADM that the donations should be put into a research fund, rather than into the BBKA's coffers, which would necessitate a £1 rise in membership fees.

I hope this will help members to make up their minds on this very complicated question, and that you will have enough time to discuss this with your representatives before the committee meeting, or at least before the ADM in January.

Sources:

(1) Dennis van Engelsdorp (Pennsylvania State Apiarist) at the CCD Seminar of the Society for Invertebrate Pathology at the University of Warwick 2008. Beekeeping magazine Sept. 08, p. 193.

(2) From a paper presented to a joint meeting of the SCI Pesticides Group and the Royal Society of Chemistry in London, 9th December 1996 (1998, vol 52, no.2, pp 165-188 (25 ref.(pp. 97-103)

(3) from a Danish broadsheet newspaper: Jyllands Post, and Politiken, 16th October 2008, with thanks to David Ashton for the translation.

By Pete Sutcliffe Cheshire Beekeeper December 2008

One point which needs to be made concerns the link the BBKA has made between accepting money from such sources and spending it on research. I would argue that once money is accepted, the use to which it is put would not transform an immoral act of acceptance into a morally good one. So the issue is whether the BBKA should accept funds from such sources and to ignore completely the use to which that money might be used. However, once it is decided to accept such monies then the BBKA is under a duty to use it in a manner which benefits its members. The BBKA will then have to justify why using this money for research purposes offers a benefit to its members.

Howard Gilbert

Also, Scientists from Bayer CropScience recently met with representatives of the national and California beekeeping associations, commercial beekeepers, bee scientists, the Almond Board, and a state agricultural official. This meeting was the first in a series of workshops intended to provide open and honest discussion of pesticides and to overcome preconceived perceptions by both sides. **Report by R. Oliver, Bee Culture**

Objectives for improved interactions included: 1) improving trust through greater transparency from manufacturers regarding products and testing protocols, 2) establishing better communications between all parties, 3) providing improved education to applicators for bee-friendly practices, and 4) addressing regulatory and enforcement systems to ensure adherence to label directions and to establish a nationwide system of reporting, tracking, and correcting misuses.

A priority action item was appointment of a Honey Bee Advisory Board (HBAB) by the two national beekeeping associations. The HBAB will work with Bayer on setting priorities, as well as the design of tests that better address beekeeper concerns. Other immediate action items included development of models for a national database for pesticide incident reporting, and ideas for web site posting of bee information.

January 6th……

Harold crowned king 1066
Mother Teresa arrives in Calcutta 1929
Rudolf Nureyev died 1993

THORNES WINTER SALE STARTS 9.00 am

(ends 31st January)

THORNES…….helping Beekeepers keep bees