



Showing honey products (No.9)

RON BROWN

A NATIONAL HONEY SHOW PUBLICATION

INTRODUCTORY NOTE

Apart from wishing to provide interest and pleasure for Beekeepers, the National Honey Show has the serious aim of raising the standards of production of honey and all other bee-produce.

With this objective in view, leading authorities have been invited to write for our Schedules on a number of subjects and their work is here available for more general distribution. We wish to thank all our contributors, they are leading exponents of their skills, we have, however, to make it clear that the advice which they give is their own individual method, we feel sure that they would be the first to encourage new alternative ways of preparation with a view to continual advancement and progress within the Craft.

Hon. General Secretary
NATIONAL HONEY SHOW

Showing honey products

by Ron Brown

It is probably true to say that almost every beekeeper in Britain has the opportunity to exhibit his produce at some local show within easy reach of his home. For instance in Devon there are 13 local branches of the County Beekeepers' Association, and each one of them stages a Honey Show at some time in the year. Every show has a section for novices, where your entry is competing only against other newcomers. Having gained confidence at this level, the next goal should be to exhibit at your County Show, where there will be many more entries and the standards are higher. The final objectives are the Royal Show at Stoneleigh in July and the National Honey Show in London, held for three days in November.

B.B.K.A. Show Rules

Even the smallest local show will produce a 'Schedule', setting out the various classes and quoting the conditions which have to be observed. These schedules are usually based on the Show Rules of the British

Beekeepers' Association, Advisory Leaflet No. 22, obtainable from the Secretary, National Agricultural Centre, Stoneleigh, Warwickshire, CV8 2LZ. Among many points covered are such basic ones as:-

- (i) No exhibit may be entered in more than one class.
- (ii) An exhibitor may make more than one entry in a class but shall not take more than one award in that class.
- (iii) All honey and wax exhibited must be the natural produce of bees owned by the exhibitor, except only for the candle and wax foundation making classes.

Points the Judge will be looking for

Firstly - that the exhibit is of correct weight and in the right class, i.e. not too dark for the light honey class and so on. The judge will have a set of honey grading classes (B.S.I. No. 1656) to check on this point.

Secondly - that the entry is free from such obvious faults as particles of foreign matter, seen when viewed in a strong light, rusty or discoloured lids, non-matching entries where two jars are specified, crystals or haze in a jar of 'clear' honey and so on. Normally any such entries are 'pushed back' and not given further consideration.

Aroma and Flavour - are of paramount importance and a good judge will test for these with great care. The steward will loosen the cap but allow only the judge to remove it, so as to preserve the 'bouquet'. The flavour will be judged by tasting from a glass rod (one of several) carefully rinsed and dried after each tasting. Many competitors will gently warm their show honey to clear it of any traces of crystals; this is in order, but the occasional unscrupulous exhibitor may heat for rather longer to darken the honey a little, for example to get it into the 'dark' class. Any over-heating can readily be detected by smell, and by a slight flavour of caramel.

Clarity and Brightness - an exhibit of good colour and absolute clarity will have great appeal and often stand out among other entries. Some judges will 'pull forward' such an entry and 'push back' entries which are by contrast dull or even muddy looking. The surface of any honey should be completely free from any froth or scum.

Viscosity - this is tested by touching the surface of the honey with a glass rod and watching the liquid flow as the rod is lifted. A good honey is stiff and viscous whereas unripe honey is very 'runny' and more 'watery'.

Water Content - honey with a water content of more than 21 % (23% for heather or clover) may not legally be sold and most certainly would not win a prize in any show. A typical good specimen of honey could have a natural water content of 17% to 18%, and the lowest water content which I have personally ever measured has been 15%, as recorded by a Bellingham and Stanley refractometer (using Dr. Chataway's Tables). Most judges will not be using this instrument, but will make a fair assessment based on long experience.

Granulated Honey

The judge will look first at the base, where any dark specks of foreign matter tend to settle and will immediately be noticed. The upper surface should be smooth, dry, uniform and of fine grain. A small pit at one side, indicating that the specimen has been judged before, is perfectly in order. Colour preferred is from a light lemon or gold to almost white, rather than a light khaki to brown. Patches of white 'frosting' on the side do not put the exhibit out of contention as they have no effect on flavour or aroma and arise naturally, but other things being equal a specimen with no 'frosting' would be preferred. Granulated honey should not 'move' or flow noticeably when the jar is tilted for a while.

Frame of Honey for Extraction

The surface of the comb must be level and stand 'proud' of the frame woodwork so that the uncapping knife may be used efficiently. The cells should be well filled and 100% capped, perhaps with just three or four open cells around the edges. When viewed from behind with a torch or bright light there should be a uniform colour with no dark patches indicating occasional cells of pollen. The wax cappings should be convex, either white or light yellow, with an absence of travel staining or weeping. There must be no tiny white tunnels visible just under the cappings (caused by larvae of *Braula coeca*, a small wingless insect sometimes found in beehives). Similarly there must be no trace of wax moth damage. The judge may test just one cell at the edge for quality of honey and absence of granulation. The cells should be uniform, i.e. all worker or all drone, with a slight preference for the larger drone cells, because from them the honey can be spun out more efficiently.

Section of Honey: Cut Comb

Few beekeepers today work for honey in the traditional wooden sections, but when successfully produced they command a high price. The comb should be as described in the previous paragraph, except that it will not come up to the level of the protective woodwork. Weight is not of paramount importance, so long as it is not less than 12 ounces, but preferably rather more.

Much more honey today is sold as cut comb in plastic boxes, usually punched out of unwired new comb built on extra thin sheets of wax foundation, using a stainless steel Price's comb cutter. The judge will expect the cut comb to fill the plastic box generously with a minimum of liquid honey (better none at all). Exhibitors should be aware that both sides of the comb may be inspected, and should not rely on the fact that only the better side is immediately visible. A comb with a small area uncapped below would be perfectly saleable but not a prize exhibit.

Chunk honey (cut comb in a jar surrounded by clear honey) makes an attractive exhibit, but few beekeepers seem to enter this class. The cut comb should be as large as possible and extend from top to bottom. The honey poured in after the comb is in position, must be clear and similar in colour to that arising from the comb itself. Ragged edges, open cells with air bubbles, comb leaning over at an angle, would all cause marks to be lost at a show.

Heather Honey

This should have an even distribution of small bubbles, be firm so that the jar may be inverted with no visible flow, yet be clear and of a reddish amber colour with no granulation. It will have been obtained by pressing clean 'super combs in a honey press (borrowed from your local branch?). It is possible that unpressed honey, extracted by a Scandinavian machine using needles to agitate the honey in the cells and make it temporarily liquid, may be used. Heather honey is thixotropic, i.e. goes runny when stirred and then reverts to a jelly within few minutes, like some modern paints. As heather honey has a lower density, it is imperative that the jar be filled almost to lid level, or some judges will not even consider the entry, on the grounds that the weight is below that stipulated.

Beeswax

Judges usually prefer a colour between a pale straw or canary yellow and a light primrose or pale orange gold. Wax of a brighter orange has probably absorbed too much pigment from pollen or propolis. A very light wax might suggest that it has been bleached with acid or hydrogen peroxide, and many judges have a prejudice against such exhibits.

A good quality wax will have an aroma suggestive of the kind of honey from which it was elaborated by the bees. Wax from sugar fed bees will be lacking in aroma. A judge may gently warm the specimen by rubbing with the palm of his hand and smelling via hand cupped to nose. A freshly moulded wax cake will have more aroma than one made last year..

When beeswax solidifies from the liquid state it shrinks and loses over 8% of its volume. A wax cake which has cooled rapidly will have 'high shoulders' and often long, deep cracks, or at least a sunken, concave surface. Such an exhibit would be given very little consideration. A wax cake that has cooled much less rapidly (but still too quickly) may have a wavy surface, formed when the skin of solidified wax on the surface has had to bend slightly when the liquid wax below solidifies and takes up less space. At a local show, a wax cake good in other respects but with a slight ripple on its surface might gain an award, but not at County Show.

In general your wax cake should be clean, bright and translucent, with a complete absence of dark specks or any foreign matter. A judge may break off a tiny fragment from the edge, looking for a clean fracture with a fine granular texture: he may even chew it to confirm that it is neither too brittle, possibly from over-heating, or too gummy, also to appreciate the flavour and aroma of a natural product neither over-heated nor adulterated. The judge will also view the exhibit with a bright light shining behind it, to check on colour and absence of foreign matter.

Mead

Here a judge will be looking for brightness and clarity, and a light yellow/gold colour suggestive of the honey from which it was made. There must be a complete absence of any sediment, haze or bubbles indicating an on-going fermentation.

A small quantity poured into a thin glass, hand-warmed, should have a pleasing aroma or 'nose' and the taste should be crisp, clean and free from any hint of yeast, mustiness or 'off-flavour' acquired from metal or other contamination. As it lingers on the palate there can be a succession of flavours, all pleasant and without any slightly bitter after-taste which can sometimes downgrade an otherwise promising sample. A 'sweet' mead must contain some unfermented honey and have a fuller flavour than a 'dry' mead in which all the constituent sugars have been fermented to alcohol. Both classes must retain the bouquet and flavour of honey to some extent. No alcohol may be added to mead exhibited - a good judge will soon recognize a 'laced' sample.

Nowadays it is compulsory for mead to be exhibited in clear glass bottles (about 750 ml capacity) with shaped corks capable of being withdrawn without a corkscrew. The bases must be 'punted' i.e. convex inside to allow any sediment to be more easily seen. It should go without saying that the glass bottle be carefully chosen to be clear of any scratches, chipped edges or bubbles from manufacture.

Cakes and Biscuits

Obviously the size, weight, number of biscuits and recipe used must accord with the schedule. The outside of a cake should be well baked but not burnt. A slit in the top would indicate that the oven had been too hot. The cake should be of a well rounded shape with no sinking in the centre. When cut to the centre, it should reveal a close, soft texture with no patchiness or cavities. Any fruit in the recipe should be well distributed and not all at the bottom. The taste should be pleasing, with a good aroma and a distinct flavour of honey.

Biscuits should be crisp rather than hard, of a reasonable thickness with an attractive colour and even surface.

Classes not specifically covered are:- creamed honey, wax candles, figures and flowers, observation hives, photographs, group exhibits and so on, but enough points have been made to give an insight into the judge's point of view.

Preparing Show Exhibits

Some regular exhibitors do quite well at times by just selecting the best samples of honey from their stocks. For the liquid honey classes, a few hours in a honey warming cabinet (temperature not exceeding 120°F (50°C)) will clear any traces of granulation and brighten up most exhibits. If you have a fair stock of

granulated honey then the best two may be worth staging as they are. However, if you really want to go for that silver cup or blue ribbon, preparation for the show has to start at extracting time in August or September.

Preparations. The basic preparation for Honey Shows really starts at honey extracting time in August and September. Before extracting a single comb, have ready three empty boxes in which to place what may be your best honey, and methodically inspect all the frames in each super before you extract honey from one of them. Hold each up with a strong light shining through to check for absence of dark cells (pollen filled), or colour changes from comb centre to sides. Sometimes the central combs in a honey super will be darker (from the tail end of the spring flow) while the outer edges of the combs, worked on later by the bees, may contain light honey from clover or lime. If all combs are just extracted as they come to hand, you may end up with a very pleasant blend of summer honey but possibly all in the same class (medium), and no entries for light or dark honey. Also it can happen that a perfect comb, fit for exhibition in the 'frame for extraction' class, gets extracted and an opportunity missed. If good combs of light, medium and dark honey are put to one side in three separate boxes, these may be extracted later on by themselves.

Liquid Honey Classes. First of all, check that any uncapped honey is at least 'ripe', i.e. that it does not run out like newly gathered nectar does when the frame is held horizontally and shaken. For normal use and for sale it is perfectly in order to extract and bottle from combs at least 75% sealed, but for show honey the extra density and viscosity to be expected from combs at least 90% sealed, may make the difference between award and no award. Any thin, unripe honey should be spun out *before uncapping* and fed back to the bees. It is preferable to exhibit only honey from combs which have not been bred in. Many beekeepers practise one-and-a-half brood chamber management, and occasionally move shallows frames from brood chamber to honey super and vice versa. Under the centrifugal force of a fast rotating extractor, honey stored in the darker cells which have been bred in may well contain fragments of pupa skins and larval debris, and this may colour or flavour the honey to some extent.

A keen exhibitor will also scrape the wooden frames free of brace comb and propolis before uncapping, to prevent traces of darker wax and any foreign matter being dislodged in the extractor.

Uncapping. For some years I used an electrically heated uncapping knife, but came to realize that the temperature of the knife blade was hot enough to give a slightly caramelised flavour to the honey it contacted. Although this was but a tiny fraction of the whole, I could detect it myself, so clearly an experienced honey judge would also. When I adjusted the blade thermostat to a lower temperature, only just above wax melting point, then it ceased to be effective unless one worked very slowly, as it cooled by a few degrees and then dragged on the comb surface. Another practice suggested by some is to dip the uncapping knife into very hot water, but unless one wipes it completely dry each time, some water is added to the honey, reducing both density and viscosity. Many years ago I came back to using a very sharp, wavy edged 'Kitchen Devil' knife, working on combs still warm from the hive, or else gently warmed in a stack of supers over a 75 watt bulb in an empty brood box, with a 'bridge' of thin metal foil over the bulb to prevent a radiation hot spot melting an area of the nearest combs.

The actual uncapping motion is similar to that of an expert chef carving a large ham, slicing neatly under the cappings to leave an exposed surface of open cells full of honey. A gentle to and fro sawing action is combined with a yawing motion, at the same time taking the knife along the length of the frame. It is suggested that the bulk of your crop be handled in the usual way, keeping back just enough frames to provide the very special show honey, and extracting these separately, perhaps in a small manual extractor.

Filtering. The secret of rapid and efficient filtration is to use warm honey and three successive layers of filters taking out coarse, small and very fine particles of wax etc. I do this very simply at home by using a standard stainless steel honey tank, in which the upper section has its own built-in filter of perforated metal. I tie a sheet of very fine denier nylon (such as that supplied to wine makers) below this, and place an ordinary kitchen colander in the upper chamber, resting on the metal filter. The colander holds back any large fragments of wax or the occasional splinter of wood which might otherwise choke the central filter, which in turn holds back small pieces, leaving the nylon to hold back only the tiniest particles. Used just by itself, the nylon would rapidly be choked by a layer of larger particles.

Bottling. It is best to wash a large number of glass honey jars at one time, and leave them inverted on wire trays in a warm room or conservatory, rather than drying them with a cloth. Although the general standard of new glassware is high, there are always some flaws, like the occasional bubble inside the actual glass, a small chip knocked out of the base, a thicker side or even a small pressure mark. So for show purposes, inspect your batch of six dozen washed jars very carefully and select several matched pairs of perfect specimens for your show honey.

Before bottling any honey, leave the honey tank for 24 hours, or at least over-night, in a warm place to allow any air bubbles or very small wax fragments to rise to the surface as froth. The glass jars themselves should be warmed, and held at an angle to the poured honey, so that it runs down the side of the tilted jar: in this way no air bubbles are trapped and carried into the jar. If you have a dog, especially a black one with a long wagging tail, keep him out of the room while bottling honey! I still remember once finding a single dog hair from our black Labrador in a jar of honey intended for showing. A fast wagging tail disperses thin hairs which can float unnoticed in the air but become very obvious in a jar of light honey. After bottling four jars (to give a choice) I would recommend running the remainder of that specially selected honey into a scrupulously clean glass vessel, stoppered and labelled for future show use. Ex-sweet jars (14 lbs) or household storage jars (screw topped) of 7 lbs capacity have been found useful in this respect. For checking the colour of your exhibits as to correct class for entry purposes, a really keen exhibitor should use a set of the official honey grading glasses (BSI No. 1656) referred to in the previous article.

Granulated Honey. Most honies will granulate after a few months, notable exceptions being pure heather honey and fuchsia. Some (like oil seed rape) will granulate within hours, others within a week or two but most not for several weeks. In order to get very fine and even granulation it is best to store the honey in jars in a cellar or cool spot where there will not be any rapid temperature changes. Although a temperature of 14°C (57°F) is regarded as best. I have not noticed much difference in the range (8 - 16°F). It is important that honey intended to granulate for showing is neither in a draught nor exposed to light from a window. If one side of the jar be colder than the other, then 'frosting' is much more likely. Since medium or darker honies granulated to khaki or brown set honey (not favoured by most judges), it is important to start with a light honey, which will give at least a creamy yellow or even golden colour when granulated. A 'water white' liquid honey (e.g. from oil seed. rape) will set to a flat, white colour, looking almost like lard. Nothing wrong with this, but most judges prefer more colour.

Honey filtered and bottled straight from the extractor tends to have more air dissolved in it (from the whirling and violent air currents around the rotating frames). Even after settling for 24 hours much of the dissolved air remains, but comes out on granulation, whether in a 28 lbs tin or a jar. On re-heating to liquify before bottling, the second granulation usually does not show 'frosting' and has less of a thin 'scum' of minute bubbles on the surface. Incidentally, the actual surface of a jar of naturally granulated honey may be slightly moist but should not be wet; sometimes the skilled use of a disc of absorbent paper (blotting or filter) can remove the last trace of wetness.

Frame of Honey for Extraction. Although the woodwork of the frame does not have to be new, it must be scrupulously clean and free from stains. Careful scraping with the small blade of a penknife can achieve this, but new frames with freshly drawn combs probably have a slight advantage.

A new frame rubbed with a slight smear of medicinal paraffin (liquid paraffin) or vaseline, will be less likely to acquire propolis deposits or stains.

Bees in a hurry during a strong honey flow will sometimes draw some large (drone size) honey cells even on worker comb or foundation, and a mixture of the two can lose some credit. A new frame fitted with a sheet of drone foundation will have a uniform cell pattern. Other advantages are that pollen is much less likely to be stored in drone cells, and also honey is more easily and completely spun out of drone cells in an extractor.

From a health point of view, a few cells of pollen in a honeycomb should be a bonus, but judges (and most customers) do not see it as such. In this connection it should be remembered that the central three or four combs in the first super above the queen excluder are more likely to have pollen stored in them.

Frames of honey for extraction should be wired to strengthen the comb against centrifugal forces, and a careful judge will look for this when shining a torch through. The one exception would be a frame of heather honey, normally extracted by pressing and so not needing any wire for support. The actual comb surface should be as flat and regular as possible; some are naturally built that way but it can help to have thin dividers (as with sections). Some books suggest thin plywood, but much better are the smooth, thinner sheets of a more modern material, Formica, Wearite or some such laminate (as used on kitchen surfaces or table tops). This can be cut into remarkably rigid sheets, to fit between frames without adding any appreciable bulk.

Beeswax. Casting a really good cake of exhibition wax is one of the most difficult (and exasperating) tasks. The best wax is usually from cell cappings, and so preparation starts at extracting time, when it is important first to scrape frames clear of propolis and burr comb before capping, also to avoid cutting too deep into cells as to include older cell walls. Cappings are freshly made by the bees each season, but cells may endure for 20 years in well kept honey frames, and will darken in colour after this time.

Some comb surfaces will be whiter than others; in general terms the shorter the time in the hive, the whiter the wax.

As well as cappings, pieces of virgin comb as sometimes built down into an empty space are obviously suitable. After uncapping several supers of chosen combs, the cappings should be drained overnight, carefully washed in rain water and spread out on a white cloth to dry, in a warm room. At this stage pick out by hand any darker fragments or obvious impurities which have somehow got in, and check that you have enough (say 10 to 12 ozs, about 300g), assuming that an 8oz cake is in the schedule. If you have only one or two hives, you will not be able to be so choosy about the wax, and will have to use whatever you can muster from all sources.

The wax can be melted in a Pyrex jug standing on a wire triangle in a pan of hot water over a very low heat. To reach National Honey Show standard the wax must be filtered through a filter paper (coffee or Whatmans No. 1 obtained from a chemist or school lab.), but the pores of filter paper are so small that one has to filter first through lint (fluffy side up) to prevent tiny impurities from blocking the pores.

The chosen mould (Pyrex or similar domestic ovenware) should be carefully washed, dried and then polished with the merest trace of detergent on a dry linen cloth; after this, on no account allow a finger to touch the inside surface of the mould. Together with the final filter and jug of liquid wax the mould should be warmed to about 80°C (180°F) in the oven, before the pouring, and any air bubbles afterwards removed with a needle point. The oven should be fitted with a tray of two or three dry bricks on the top shelf, to hold the heat and maintain the temperature of the upper wax surface.

Check that the mould rests on a perfectly level surface in the oven.

After pouring the wax to a pre-determined level, place a sheet of glass over the mould. It is best to do all this last thing at night, and to go to bed after closing the oven door and switching off the oven. This avoids accidental vibrations from other people working in the kitchen, also the temptation of looking in from time to time. Next morning lift out the mould and invert it over a towel on a kitchen working surface. If the wax fails to come out after a gentle tap, cool in the fridge for a couple of hours and try again, or place the mould plus wax (right way up) in a bowl of cold water, when the wax should float up, to be carefully dried with a smooth towel. A gentle polish with a dry thumb or piece of well-worn silk should give the final touch. For a fuller description one can refer to a specialised text in a library, ('Beeswax', published by B.B.N.O).

It is appreciated that several items have not been covered, for example honey cakes and biscuits, heather honey, wax candles, mead, cut combs and sections. Some of these topics have been covered in previous 'Home Farm' articles, for example mead in issue No. 66, heather honey in issue No. 41, but it is hoped that the examples described will give some idea of the approach to exhibition in Honey Shows, and that readers will be encouraged to enter in their local and county shows, where there are special classes for 'beginners', and later on at the Royal and the National, where their exhibits will be seen by many thousands of people, even by Royalty!

The National Honey Show presents annually a three day show of the best of the products of the honeybee, with additional classes for kindred interests and skills, including school bee-keeping, a lecture programme and a display of the latest and finest bee-keeping equipment on the market today.

It attracts entries and beekeepers from all over these Isles, and a number of leading organisations hold meetings during the Show.