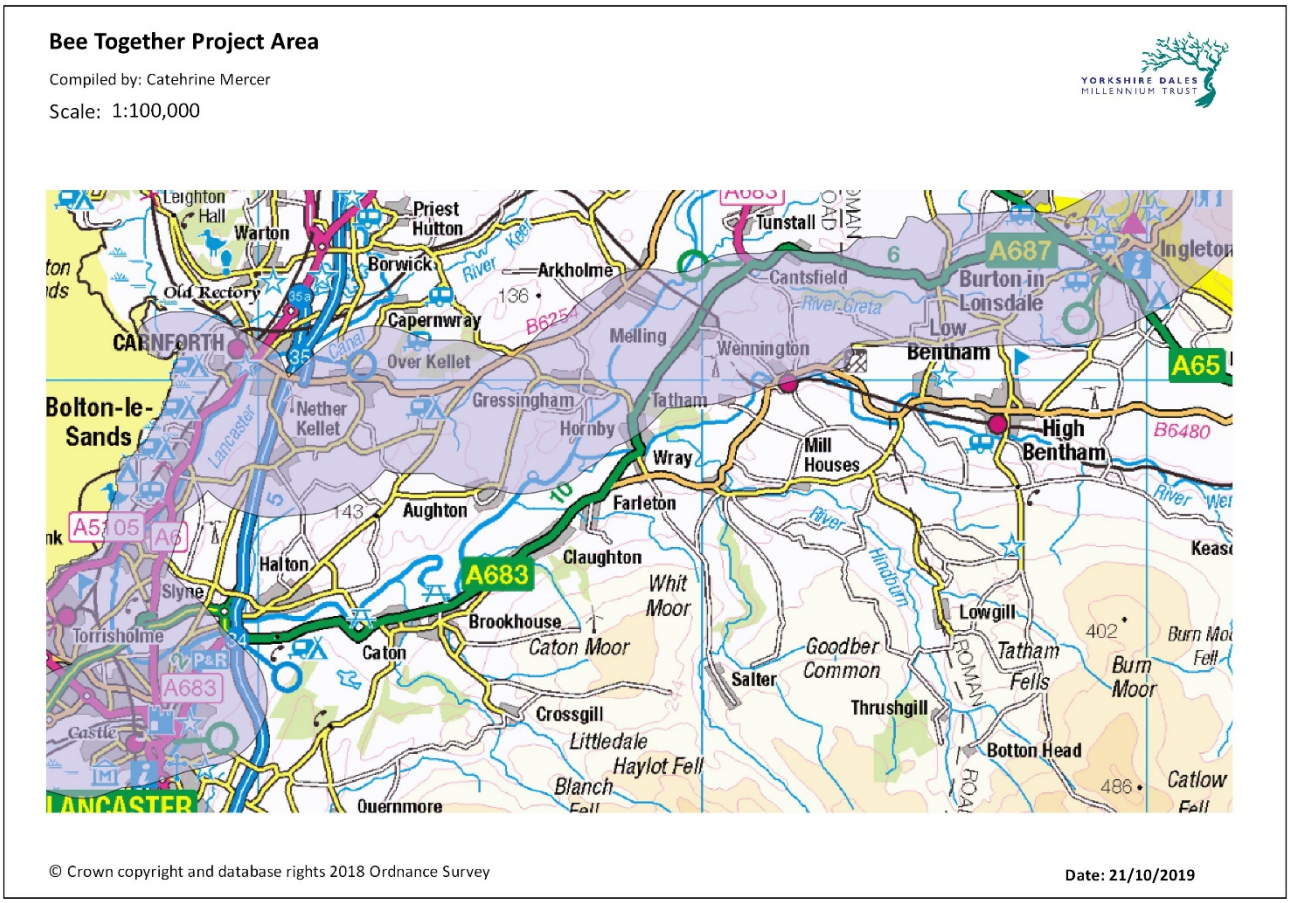
LUNE VALLEY COMMUNITY BEEKEEPERS

NEWSLETTER NOVEMBER 2019

October activities

Club meeting

Our first meeting of the winter season took place on 16th October at the Scarthwaite Hotel, when a good turn-out of members heard Catherine Mercer, Project Officer of the *Bee Together* project which aims to connect communities and landscapes to reverse the decline of wild pollinators, and in particular, wild bees, give an interesting talk about the progress so far. This ambitious project aims to create a series of interlinked pollinator patches running from Lancaster to Leeds. The following map shows the line of the project. If you would like a copy of this, please drop me an email.



Catherine told us that she is not only looking for sites for traditional meadow-style wildflower planting, but any areas where some sort of habitat change could be implemented to improve it for pollinators. This includes nest box installation, more formal planting schemes, spring bulbs, bee bank creation etc. If you have any suggestions you can contact her directly on catherine.mercer@ydmt.org

National Grid

During the month I was invited to meet representatives of the National Grid at their Heysham Sub-station. They have commissioned the Wildlife Trusts on Lancashire, Manchester and North Merseyside to carry out an impressive project to improve the woodland on their site and develop large patches of native meadow flowers to benefit pollinators. They also wanted to include honey bees and we discussed and agreed the siting and building of an apiary site, to be managed by one of our members. The whole project, including the apiary, is planned to be completed by the end of March 2020, although it is unlikely that the apiary will house bees until later in the year.

Lancaster Youth Challenge

Founded in September 2015, Lancashire Youth Challenge is a Charitable Incorporated Organisation with the aim of supporting young people who are experiencing personal challenges and difficulties such as mental ill health, drug and alcohol related issues, homelessness, family breakdown, anti-social behaviour and criminality, to overcome these challenges and achieve their own personal success.

I met with Guy Christiansen, Chief Executive, to explore the possibilities of working together on some projects. We came up with two possibilities. The first was that a team from LYC would carry out a 12-month project to manage and maintain a designated area of the woodland at the apiary. This might include:

- clearing and logging fallen timber to enable woodland flowers to thrive
- planting wildflowers
- making refuges for hedgehogs, bats etc from fallen timber
- coppicing and tree trimming
- hedge maintenance
- possibly making charcoal
- making and maintaining footpaths.

The second was that a smaller team, working with club members, might help to set up a bee breeding apiary which could include:

- preparation of the site
- siting of bee hives
- preparation of frames and foundation and insertion into hives
- introduction of bees to hives
- monitoring of bees' development
- splitting of hives to form two colonies.

Discussions are continuing and further details should be available shortly. If you are interested in getting involved with either project, please let me know.

Alternative Beekeeping

Interest in our alternative approach to beekeeping continues to grow and this month saw me speaking to Shropshire Beekeepers' Association in Shrewsbury. It was quite surprising and very pleasing to note the number of people who no longer treat their bees. There was also quite some interest in creating pollinator patches.

Training course

On Sunday, 20th October we ran our one day *Introduction to Alternative Beekeeping* workshop at the Scarthwaite Hotel. Due to a number of last-minute cancellations the number of attendees was quite small, but their very positive feedback suggested that this might well have been a benefit as we had plenty of time to explore the questions raised, in some depth.

Morecambe Carnival 2019

One of the themes of this year's Carnival was wildflowers and hedgerows. Despite the poor weather over most of the Carnival weekend, the event proved a success. On Wednesday, 30th October I was invited to attend the Morecambe Carnival AGM where, along with a number of other beneficiaries, I was presented, on behalf of the Club, with a cheque for £230 to support the planting of more wildflowers. The intention is to plant more native woodland plants in the apiary woodland over the winter and early Spring.

Out apiary sites

The excellent out apiary site near Tatham in the Lune Valley is still available. If anyone is interested, please give me a call.

November meetings

Our next meeting will be on **13th November at the Scarthwaite Hotel**, starting at 7-30pm, when our speaker will be Bob Spencer. Bob is a Trustee of **Bees for Development**, an organisation that promotes sustainable beekeeping to combat poverty and to build sustainable, resilient livelihoods. It supports beekeepers to maintain environments that are good for bees, for biodiversity, and for people. Bees for Development works with local partners on community-based projects, and provides a wide-range of information services.

On **Sunday, 17th November** we shall be running a one day practical workshop on **managing woodland for pollinators**, which will include coppicing and other practical skills. Run by Catherine Mercer of Bee Together, the workshop will be held at the Club apiary, start at 10-00am and finish around 3-30pm. Tea and coffee will be available all day but please bring your own lunch and dress for working outside. **If you intend coming to the workshop it would be helpful if you could let me know.**

Club activities programme for the remainder of 2019-2020

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Wed 11th Dec — **Speaker Meeting** — **Scarthwaite Hotel, 7-30pm**

Topic: Obtaining bees and splitting colonies — **Speaker: Fred Ayres**

Fred will explain the various ways of obtaining bees, together with their advantages and disadvantages, and then explain several techniques for increasing your number of colonies by splitting them.

We shall also discuss the possibility of a Club initiative to do this on a collective basis for those interested.

2020

Wed 8th Jan — **Social Event** — **Scarthwaite Hotel, 7-30pm**

The evening will start with wine and cheese followed by another opportunity to see *"More than Honey",* a remarkable documentary film made in 2013 by the Swiss filmmaker Marcus Imhoof, which looks into the fascinating world of bees, and showing small family beekeepers and industrialised honey farms. *"More than Honey"* is a film on the relationship between mankind and honey bees, about nature and about our future. It is well worth watching.

Wed 12th Feb — **Speaker Meeting** — **Scarthwaite Hotel, 7-30pm**

Topic: The Woodland Trust — **Speaker: Paul Littlewood**

Paul will explain the work of the Woodland Trust and provide advice on how we should manage the woodland at our Club apiary.

Wed 11th Mar — **Speaker Meeting** — **Scarthwaite Hotel, 7-30pm**

Topic: Thermoregulation in the hive — **Speaker: Keith Bartlem**

Keith is an airline pilot, and experienced beekeeper. His talk will help to improve our understanding of how, why, and when bees monitor and alter the hive temperature and is particularly relevant in our usage of insulated hives.

Asian hornet

More than a dozen Asian hornets have been found in Christchurch, Dorset. Specialist are now trying to find their nest.

In recent weeks individual Asian hornets have been sighted in Hampshire, Kent, Norfolk and Staffordshire but the discovery of a sizeable number of them in one place is a worrying development.

Not all fruit is Vegan!

Several high street chains, including Pizza Express and Costa Coffee, have admitted that they sometimes coat the fruit they have on sale with bees wax in order to preserve it and make it look shinier and more attractive. This goes against the strict standards of veganism, because it involves an animal product.

Should we import bees?

Imports of honey bees are at a record high and growing year on year. Many of the dealers offering nuclei or packages rely on imported bees, yet as the article later in this edition *Black year for European beekeepers* sets out, exports of honey bees from some European countries may be significantly reduced next year. Some dealers have already closed their order books for 2020. Does this matter?

In 2014, COLOSS set up a study involving 621 colonies of honey bees of 16 genetic origins. The bee hives were set up in 11 countries in Europe, with one local strain and two foreign strains of honey bees at each location. The findings were as follows:

- Honey bees with roots in their local environment fare better and live longer than imported bees from foreign environments.
- There is increasing evidence that the global honey bee trade has detrimental effects, including the spread of new diseases and pests.
- The way forward is to strengthen the breeding programmes with local honey bees, instead of imported queens.
- This would help maintain the bee population's natural diversity, contribute to preventing the collapse of bee colonies, optimise sustainable productivity, and make it possible to maintain continual adaptation to environmental changes.
- Damage from importations may arise from accompanying pests and pathogens, but also introduced bees represent a burden to the genetic integrity of local populations (that is, they have a negative effect on a local population's 'local adaptation').
- The spread of imported genes into the local population may increase genetic diversity but is not necessarily beneficial as maladapted genes may contribute to colony losses and are in the long-term unsustainable.

It seems fairly clear from this that UK beekeepers should give serious thought to producing more colonies from our existing stocks.

Wildflower verges designed to help bugs could backfire because councils are using non-native species

An example of a sown wildflower verge featuring foreign cornflower and poppy varieties

Councils attempting to plant eco-friendly wildflower verges could be inadvertently harming butterflies, beetles and bees, a charity has warned, because they are sowing foreign seeds.

Plantlife has urged local authorities to let British native wildflowers grow on verges, and pointed out many colourful plants including orchids and oxeye daisies which are available and better for native fauna. Dr Trevor Dines, a plant specialist and spokesperson for the charity, said that

natural wild verges can support 1,400 species of insects which feed on the plants, whereas the seed mix can only support a maximum of 40 such species.

One council, Rotherham, was praised by many for its "eco-friendly" wildflower scheme, after seeds were sown across its verges. However, these were from a seed mix and feature some plants which are not native to Britain. The flowers include the European poppy, California Poppy, Cornflower and Corn Marigold.

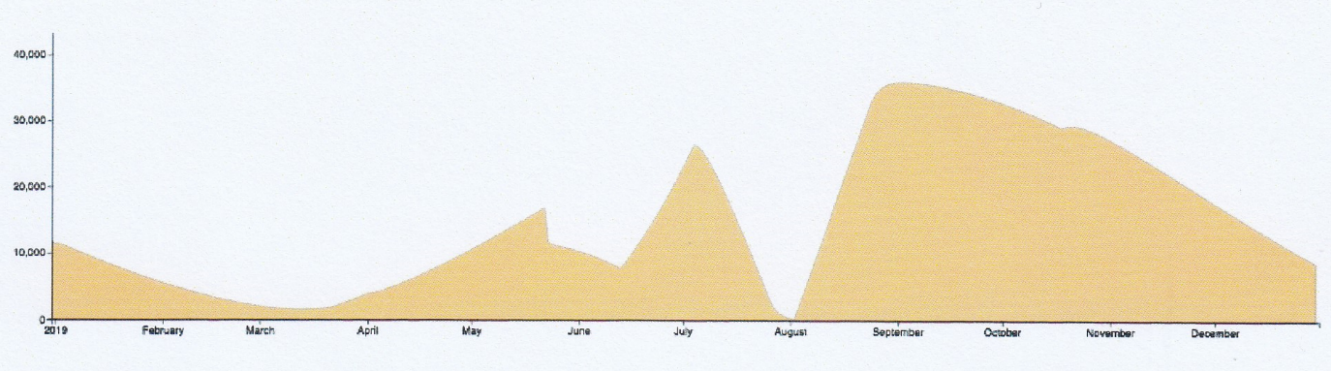
Orchids on a road verge in Kent

Oxeye daisies are natural and colourful

This is happening across the country, Dr Dines said. Plantlife is currently working with local councils in rural areas to encourage them to let verges grow naturally. He explained: "We should let the native flora do the job for us or use natural seeding if they are not there, so we bring seed in from a species rich wildflower meadow to bring back the native species to our verges, parks and gardens. He added: "In the spring, there is some research that shows pollinators definitely prefer native plants, dandelions, celandines, hawthorn and early flowering trees. All the different insects and invertebrates are important to consider too, natural wild verges can support 1,400 species of insect whereas the seed mix can only support 40 species max. We aren't providing that by just sowing these colourful mixes of pollinator plants. These are things like aphids and beetles, butterflies and moths, caterpillars, it is only by doing that with native species that you get that mixture of life coming in."

Where did all my honey go?

We're talking swarming, and if you want to miss the peak nectar flow during late July/early August, the worst possible date for a swarm to occur is about the 20th May. A prime swarm will leave the colony with dwindling numbers of foraging bees during July, and they will be just starting to build up again from early August leaving virtually no foragers at the time of the peak



How the foraging bee population changes after a swarm

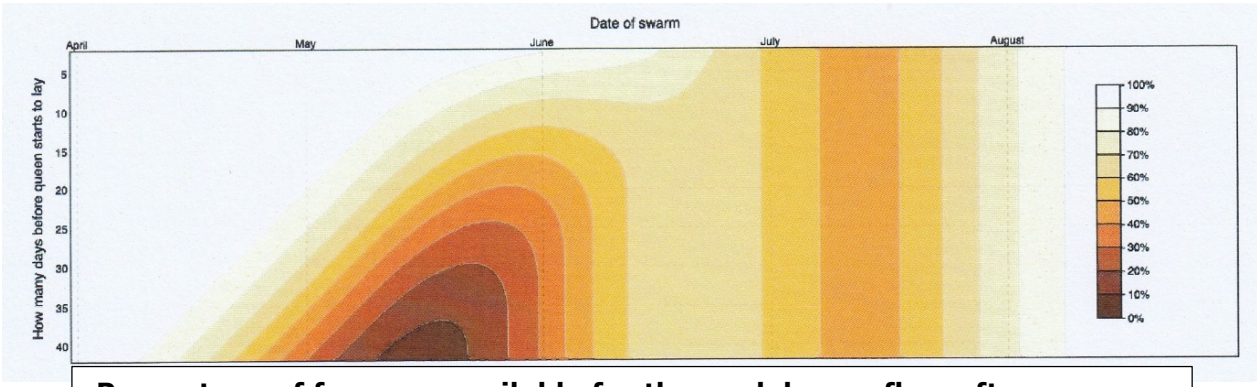
nectar flow. To add insult to injury, during the peak flow there will be masses of larvae and house bees munching away at any stores the colony may have collected. So what happened to all the

foragers when you needed them? When a swarm happens, it takes the queen and 60-70% of the bees, with a preference for the younger house bees, leaving behind a depleted colony that has to rebuild from the swarm cells that will be maturing. This departing swarm has a huge impact on the remaining colony over the next three months!

Take a look at the graph above. It shows how the number of foraging bees changes over the season after a swarm occurs. Say the swarm leaves on the 20th May, with an instant drop in forager numbers (it's not a huge drop because the majority of the bees in a swarm are house bees). Over the first three weeks, the house bees that are left will become foragers, but, because more house bees left with the swarm, this is not enough to make up for the existing foragers that are dying, so the number of foragers decreases. At the end of this period (mid June), and this is the surprising bit, the number of foragers builds up rapidly for weeks 4 to 6 (the last 2 weeks in June, first week in July). Why? Well, these are the last of the brood that the original queen laid when the colony was expanding quickly in late April-early May.

Unfortunately, now the good times end. It's now into July, there have been no more hatching brood since mid June, and the foraging bee numbers are dropping and dropping. By the end of July there will be no foragers at all but (belated) help is at hand. The new virgin queen in the colony will have hatched, mated, and been laying for about a week so the foragers will start to build up again - from mid August - just at the end of the main nectar flow. Oh well. No honey this year!

What can you do about it? The amount of foraging bees available for the peak nectar flow depends critically on when a swarm occurred, and how quickly the replacement queen gets mated and starts laying. The contour plot below shows this relationship. You can use it in a couple of ways. First, it can be used to predict how your honey yield might be affected by the swarm - look along from left to right to the date the swarm occurred, then look down until you match the number of days it took for the new queen to start laying. The colour at that point gives the percentage of foraging bees that you will have available for the peak flow. 100% would have been the number if the colony did not swarm.



Percentage of foragers available for the peak honey flow after a swarm

You can also use it to decide what to do if you have a swarm on a particular date. If a swarm departs very early in April you can be quite relaxed knowing that even if it takes nearly six weeks for the queen to mate, there will still be a good foraging population at the time of the peak flow. However, if the swarm has gone at the worst time - the third week in May, then one thing that can be done to improve this situation is to introduce a new mated queen as quickly as possible. If a laying queen was accepted within 3 days, then the foraging bee population would be within 10% of the population without a swarm happening during the main flow.

Barry Crabtree, Ipswich & East Suffolk BKA, via ebees

International bee organisations

For many beekeepers, beekeeping is something we do on our own, meeting up with fellow beekeepers from our particular bee club from time to time to talk about our hobby. There are, however, many large international organisations concerned with bees and beekeeping of which the typical beekeeper knows very little. Here are a few:

Founded in 1893, **Apimondia** or the International Federation of Beekeepers' Associations promotes scientific, ecological, social and economic apicultural development in all countries and the cooperation of beekeepers' associations, scientific bodies and of individuals involved in apiculture worldwide. Its major objective is to facilitate the exchange of information and discussions by organising Congresses and Symposia where beekeepers, scientists, honey-traders, agents for development, technicians and legislators meet to listen, discuss and learn from one another.

Bees Abroad provides education and technical advice on beekeeping and relevant business skills by setting up and supporting field extension services. Training courses are also run for local beekeepers. As a non-profit making organisation, support can be given to beekeepers and their families wherever poverty defines need. Bees Abroad uses funds for the relief of poverty and ensures that projects can be sustainable. Bees Abroad promotes and supports projects that use affordable, appropriate techniques and equipment and will not support projects involving unsuitable beehives or imported species of honey bee.

Founded in 1993, Bees for Development was the first organisation to articulate the reasons why beekeeping is such a useful tool for alleviating poverty while helping to retain biodiversity. Bees for Development focuses on simple methods of sustainable beekeeping, always using local bees and local materials. They have helped many thousands of remote and poor families to earn essential income to meet their basic needs. They encourage farmers to make simple, low-cost bee hives so that more people can harvest and sell honey, turning natural resources into sustainable livelihoods with great benefit for the wider environment.

The **Bee Informed Partnership** (BIP) is dedicated to working with beekeepers throughout the Americas to better understand which management practices work best. It gathers survey data from thousands of beekeepers every season to understand how different management practices affect honey bee health, and report findings back to the industry.

COLOSS is a honey bee research association formerly funded by the European Union COST Programme (Action FA0803) and currently by the Ricola Foundation – Nature & Culture, Veto Pharma, the University of Bern and the Eva Crane Trust, which aims to explain and prevent massive honey bee colony losses. COLOSS does not directly support science, but aims to coordinate international research activities across Europe and worldwide, promoting cooperative approaches and a research programme with a strong focus on the transfer of science into beekeeping practice. COLOSS has nearly 1,300 members drawn from 95 countries worldwide.

Established in 1949 for the advancement of bee science and beekeeping the **International Bee Research Association** (IBRA) promotes the value of bees by providing information on bee science and beekeeping worldwide.

IBRA is internationally recognised as the world's primary source and foremost provider of information on bees. Its database and information services, including journals, teaching aids and other publications, embrace all bee species whether managed by man for pollination or their products, or truly wild. IBRA has one of the largest databases of scientific information on bees and bee related interests in the world. It is funded by sales of publications, through the generosity of members and supporters, and by donations or legacies.

The World Bee Project CIC is the first private organisation to launch a global honey bee monitoring initiative to inform and implement actions to improve pollinator habitats, create more sustainable ecosystems, and improve food security, nutrition and livelihoods by establishing a globally-coordinated monitoring programme for honey bees and eventually for key pollinator groups. It's mission is to increase food security and livelihoods by combining AI and sensor systems with world-leading bee research to provide farmers and the general public with the knowledge and solutions they need to foster healthy habitats for pollinators.

Black year for European beekeepers

Beekeeper associations across Europe are claiming that 2019 has been one of their worst years ever as unusual weather driven by climate change has wrought havoc with bees, the crucial pollinators of our food crops, that are now struggling to survive. Unpredictable weather, especially in Italy and France, has produced what is being termed the worst honey harvest ever.

In Italy, where January to early September saw over 1,000 extreme weather events, the Country's main agricultural union Coldiretti said 2019 has been a "black year", with "a harvest almost halved" from the 23,300 tonnes of honey collected in 2018.

In France, spring was curtailed by a sudden cold snap, followed by a heatwave at the end of June. In some areas of southern France, the heat melted the wax in the hives, trapping the bees, It is expected to be "the worst on record", according to the National Union of French Beekeeping, with "fewer than 9,000 tonnes" – almost a quarter of the crop harvested in the 1990s.

Romania was the European honey "champion" in 2018, with some 30,000 tonnes. However, due to the lack of rainfall last autumn and winter which hit rapeseed crops

very hard, this year the country's production will drop below its recent yearly average of 25,000 tonnes, according to the ROMAPIS association.

Frost, drought and heavy rains resulted in fewer flowers or flowers without nectar, according to Italian, French and Romanian beekeepers, many of whom were forced to feed their bees to avoid them starving to death.

In Spain, the leading country in terms of the number of hives, the harvest has been poor since 2015, with a drop of 5.2 percent in 2017 and a 2018 season which was "not up to expectations", according to the country's agriculture ministry.

Beekeepers are increasingly concerned about the effects the weather is having on their colonies with many reporting that their bees have killed all their drones and drone brood to get rid of extra mouths to feed. The concern is that the lack of drones for mating may lead to a "lack of fertilised queens" next spring, meaning fewer new colonies and bees.

Bee mortality has also shot up in recent years due to an "epidemic" of the Varroa parasitic mite, the uncontrolled spread of the Asian hornet in Europe and the "intense use of pesticides in agriculture", according to the French Cyclops report.

Thanks to a particularly hot summer in 2018, there has been renewed interest in beekeeping in Norway and Sweden, although it remains a marginal activity. According to the Norwegian Association of Beekeepers, which now has 4,000 members compared to 2,500 a few years ago, production is around 1,300 tonnes, which far from satisfies the local market.

In Denmark, where production was up in 2018, local producers are finding it difficult to shift their produce. The country's association of professional beekeepers says stiff competition from cheaper foreign honey has left its members with an estimated 800 tonnes or more of unsold stock.

Best honey in the World?

Apimondia or International Federation of Beekeepers' Associations promotes scientific, ecological, social and economic apicultural development in all countries and the cooperation of beekeepers` associations, scientific bodies and of individuals involved in apiculture worldwide.

The 46th Apimondia annual gathering took place in Montreal from 8th to 12th September. Drawing an estimated 4000 attendees, the event featured the World Beekeeping Awards, which included the competition for "Best Honey in the World."

Each honey entry consisted of three samples, one of which was sent out for "full laboratory analysis" by an accredited facility armed with Nuclear Magnetic Resonance (NMR) technology, while the other two were held for judging and display in the Expo area of the show.

What surprised everyone was that 45% of entries failed laboratory analysis. Attendees walking into the competition area immediately noticed missing entries replaced with cards stating, "This exhibit has failed laboratory examination and cannot be judged further."

Talk around the show centred around the issue of adulteration. Apimondia officials were tight-lipped about the breakdown of reasons for rejection, or those entries' countries of origin, but stated that the lab tested for such things as illicit sugars, antibiotic and pesticide residues, HMF, and country of origin discrepancies.

Whilst it is distressing to see almost half of honey entries failing to meet accepted standards for pure honey, the fact that testing technology appears to be working as designed has to be reassuring.

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