



The

Knowledge Talk initiated by Toby's Estate Coffee in Brisbane and presented by Peter Giuliano from the SCAA has shed light on how the new Coffee Taster's Flavour Wheel was produced.

Peter opened his talk by saying how people these days really care about the way coffee tastes, but up to this point, very little research into flavour had ever been done.

Coupled with the realisation that the traditional process and tools used to recognise and describe flavours are flawed for certain purposes, particularly at origin, World Coffee Research was set up. This is a global organisation entirely

devoted to coffee research, with a vision "To create a toolbox of coffee varieties, genetic resources and accompanying technologies, and to disseminate them strategically and collaboratively in producing countries to alleviate current and future constraints to the supply chain of fine Arabica coffees".

Cutting edge research involving two major projects has since been undertaken. The collaboration, which Peter says he's particularly proud of, involved sensory scientists across five institutions (including two universities), three countries and hundreds of people; representing the largest study done



ever on coffee flavour.

The first of two major research programs into coffee flavour involved sensory scientists with no prior coffee knowledge from Kansas State University (tasting robots, Peter called them) and a team of 20 professional coffee tasters from the USA. Based on the tried and tested scientific methodology known as “sensory flavour analysis” and using the four basic tastes of sweet, sour, bitter and salty, every possible flavour found in coffee was identified and described, along with reference points for each.

The results were published by World Coffee Research - in the Sensory Lexicon, a 50-page document that represents the new language of coffee flavour.

Next came the challenge of organising all the documented flavours into a wheel, the kind of tool the industry is already familiar with.

The original coffee flavour wheel was designed in 1995 - by Ted Lingle, the first president of the SCAA. It was a big step forward at the time and was the industry standard for identifying and describing flavour for more than two decades. Over the years, however, weaknesses in the language became apparent. It used some jargon most people don't understand and flavours they're not familiar with, and therefore have no sensory reference. Examples were “cuppy” and “nippy”. That said, it was timely to take a closer look at this coffee flavour wheel and change it to a new one, based on the information in the Sensory Lexicon.

A PhD candidate at the Food Science and Technology Department at the University of California Davis designed a computer program

to do the job - along with the collective wisdom of over 70 professional coffee tasters, university research and sensory analysts, and a design firm.

Basically, all the flavours in the Sensory Lexicon were listed and grouped in tiers by the participants in the research - with general flavours positioned in the inner tier on the wheel, the umbrella flavours on the middle tier and the specific descriptors on the outer tier. For example, using this “centre out process”, the inner tier is “fruity”, the middle “citrus” and the outer “lemon”.

The design team researched the colours and applied them based on the data collected, rather than on making the wheel look complete. Hence, there are some gaps. The gaps between the colour groupings are significant. A very small gap indicates that the flavours are similar - light and dark chocolate, for example. A small gap means they are less similar and a large gap least similar - hazelnut and peanut, for example.

What is particularly exciting about the results is that the coffee professionals and sensory analysts from the university organised the flavours very similarly, giving credibility to the research.

Thanks to the work of World Coffee Research and all those involved so far, the global coffee community now has a new vocabulary and a new set of tools to use for working with coffee flavour. Anyone who has ever used both flavour wheels, clearly recognises how much easier the new one is to use and understand.

Peter advised that one of the most useful things a coffee professional can do, is to ensure they use ONLY the documented terms

when describing coffee to their colleagues and customers. That way we will all, customers included, learn to speak the common language to refine both our perception of taste and the vocabulary we use to describe it.

Already I know of two roasteries/cafés in Brisbane who've indicated their enthusiasm for communicating the new language by painting it on their walls and floor: Extraction Artisan Coffee Roasters and Wolff Coffee Roasters.

Peter said everyone is invited to be involved in the ongoing work of World Coffee Research. He emphasised that both the Sensory Lexicon and the new flavour wheel will remain “works in progress”, allowing for new flavours and descriptors as they are identified in the future.

Next, there's collaboration with the producers of Le Nez du Café kit to come up with another kit that matches the aromas from the Sensory Lexicon and supports coffee professionals in making use of the new coffee flavour wheel.

Translations are in progress, with Spanish, Korean, Chinese, German and Portuguese already completed. Italian and French are also being developed.

You can download the Sensory Lexicon free of charge from the Internet and purchase the Coffee Tasters Flavour Wheel from the SCAA. Digital versions are now also available.

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