

SOCIETY NEWS

THE SOCIETY OF FLAVOR CHEMISTS, INC



President's Message

Cynthia Lipka 2014-2015



It is always at this time of year especially that I find myself becoming a bit more introspective. I ponder questions big and small more than I would at any other time. Maybe it's just that I'm getting older. More likely it's simply the end of one year and the beginning of a new one. It's typically the time when we think about what has been and new resolutions.

We have had a very good start to the year with our kickoff meeting in Chicago with Homaro Cantu of MOTO speaking to us. As a result of that meeting, I had the opportunity to go

to that world renowned cutting edge restaurant. It was really an amazing experience - 16 courses {wine pairings with each.....!}. Some presentations were so visually beautiful it seemed almost a shame to eat them. The food is amazing but exceedingly different. Sometimes that different was outstanding but there was one instance where - let's just say - it will be the last time for cock's comb for me. {No, not the flower.....}

We had our Flavor Symposium at the Liberty Science Center in New Jersey. This two-day event was intricate and involved over the course of 2 days {and 1 dinner}. It's very difficult to achieve a high level of approval at any sort of event, especially one which is attended by such a wide variety of individuals, skill sets, knowledge bases and experiences. Due to the hard work of a very dedicated team, we actually exceeded our wildest expectations and based on your feedback we had over 95% stating that they symposium was either very good or excellent. If you did not have a chance to attend, you will now have to wait now until 2019 for the next one!

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President's Message-continued

Cynthia Lipka 2014-2015

Speaking of waiting, let's look into some events planned for early 2015. In February, we will be having our biennial Monell meeting. We will honor Gary K. Beauchamp, PhD, who has led Monell since July 1990 by inducting him as an honorary member of the Society of Flavor Chemists. We will have four presentations from their illustrious staff and tour our library showing the grand addition of three new bookcases and over 250 books through an exceedingly generous donation from IFF. (Alfred, I hear you whispering 266 to be exact!) We are certainly well on our way to becoming a world class flavor library.

March will be our meeting in Anaheim with NAFFS and CSA in conjunction with the Natural Products Expo. Healthful beverages is our main topic. We will address formulation challenges and solutions for flavor, texture and ingredients. TIC Gums will be presenting as well as Bob Weeks from Weeks communications.

April will bring us to Cincinnati to talk about hops. There has been a huge explosion in the beer market recently with craft brews and it seems to me that a lot of it revolves around the 'hoppy' notes in each. And I don't honestly know if this is the crux of their 'hops' topic, and so I'm not promising that but a girl can hope, can't she?

Actually, although it sounds long, a single year is a pretty short time to be president of this group. I think that those of us who choose to enter into this service create grand plans for what we would like to accomplish. And it's awfully darn hard to accomplish grand plans. And it's not even remotely close to being something that can be done single-handedly. It requires not only help and assistance but also advice from others. John Kennedy told us that "We must stop and find the time to thank the people who make a difference in our lives." So that is what I would like to do right now. Thank you. It is entirely true; you have made such a difference in my life. I cannot even begin to put it all into words. But what I can do, is make this wish:

A wonderful, healthy, happy and prosperous New Year for all!

Cyndie Lipka

Welcome, New Members!

Michael Narciso, Apprentice

Michael was born in Livingston, NJ, and later went to Providence College in Rhode Island as a chemistry major as well as being captain of the soccer team. During college he had two flavor internships at Mastertaste. After college he was accepted into the Kerry flavor training program in Beloit, Michael currently lives in Madison, WI.

Kimberly Bendickson, Apprentice

Born and raised in West Canada, Kimberly discovered her passion for food early when she realized that all of her social activities revolved around eating. She has a BSc in Food Science from McGill University in Montreal. After college she went to work for Kerry in Teterboro NJ, then transferred to Beloit WI. She enjoys travelling, yoga, volleyball, volunteering, and eating!



Wai Lam, Certified

Born and raised in Tennessee, Wai now thinks of herself as a Jersey girl. She graduated from Rutgers University with a degree in Biology, and is now working on a Masters Degree in Food Science at Drexel University in Philadelphia. The two most important things to her are family and friends. She enjoys travelling, cooking, and considers herself an avid yogi.

Lauren Morris, Certified

When Lauren is not busy creating flavors, she enjoys spending times with her husband, two dogs, and ever-so-handsome 2.5 year old son. She enjoys taking yoga lessons, rock climbing, and hiking. She looks forward to her next flavorful adventure in her career.

Welcome, New Members!



Elected at the September Chicago meeting: left to right: Aparna Oak (Imbibe) - Apprentice; Christopher Proskey (FFS) - Certified; Peggy Smolkovich (Kerry) - Certified, and Jennifer Tartaglia (Takasago) Certified.

Christopher Proskey — Certified

I grew up in northern New Jersey and have lived there all of my life. I enjoy music, spending time outdoors and trying new culinary experiences. While studying biology during my undergrad, I worked as an intern at Flavor & Fragrance Specialties and have been there ever since. I like the fact that I can be creative in my work and apply my science background all while having the opportunity to taste and create new foods and beverages. I am passionate about learning new things whether it be at work or non-work related and recently completed my MBA at Montclair State University.

Aparna Oak — Apprentice

I am an immigrant from India. I like to cook and try different cuisines. My hobbies include biking, hiking, and reading. I use my spare time and weekends to participate in local Indian cultural events. Being the mother of a special needs child, I also volunteer on the special education advisory committee in my school district.

Jennifer Tartaglia—Certified

Jennifer holds a BS degree in Food Science from Rutgers and a PhD in Food Science from the University of Minnesota. She currently works at Takasago where she is responsible for heating, cooling, tingle, salivation, masking and enhancing flavors. She enjoys integrating trigeminal sensations with more traditional flavors.

Peggy Smolkovich — Certified

Peggy Smolkovich holds a Bachelors Degree in Food Technology from Ohio State University in Columbus. She obtained a certificate in Pastry Arts from Midwest Culinary Institute in Cincinnati. She has a husband, Nicholas, and they have two college-age daughters, Katie and Terra. Peggy is a former Cargill Flavor Systems employee and now works for Kerry in Wisconsin. She currently works on Sweet and Beverage flavors for Kerry.

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Get involved in your Society! Consider joining one of these committees!

Society of Flavor Chemists Breakfast at the Institute of Food Scientists Annual Meeting in New Orleans



Held at the Hilton Riverside, the SFC breakfast was sparsely attended. Thirteen attendees enjoyed a buffet with scrambled eggs, breakfast meats, hash browns and assorted pastries. Our speaker was Zack Lemann of the Audubon Nature Institute's Butterfly Garden and Insectarium. The Audubon's facility is tucked into the US Customs building just a few blocks from the hotel, between the French Quarter and Warehouse Districts in New Orleans. This is the same Audubon organization which owns the zoo in New Orleans.

Zack Lemann is the Animal and Visitor Programs Manager. His talk described Entomophagy, the consumption of insects, worldwide. Roughly 2 Billion people worldwide rely on insects as a protein and related nutrition source, and not all of this is strictly nutritional. Some insect consumption has become culturally significant and celebrated. Insects are generally high in protein and are excellent converters of dietary mass to protein, many fall between 1:1 and 1:2 in protein production while chickens are at best 1:2 to 1:3 and beef is closer to 1:15. Insects can also be significant sources of minerals and various vitamins, which should come as no surprise.

Examples of insect cuisine were presented during a slideshow, with engaging information and anecdotes. Selection, preparation, and examples of insects as ingredients were shared. Mr. Lemann has traveled the world and appeared on television presenting insect dishes, introducing a broader culture to the concept. He also highlighted numerous commercially available products using insects either whole or converted to a powder for nutritional ingredient use.

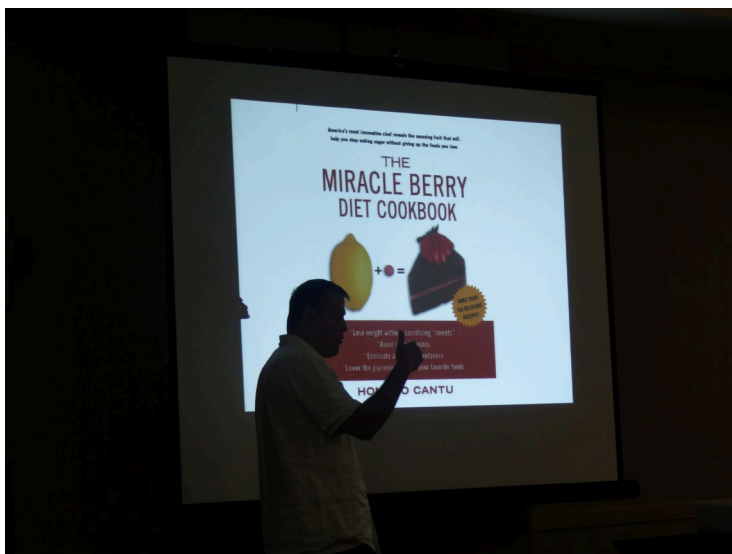
The audience could taste three examples of insect dishes, designed to introduce people to the concept. First, a bowl of deep fried wax worms dusted with cinnamon sugar. As with anything deep fried and coated in cinnamon sugar, these tasted like little churros. Second, chocolate chip cookies with two crickets on top tasted like slightly crunchy chocolate chip cookies. Third, a chutney type salsa with wax worms. The texture here was of course not crunchy, though the worms don't have much flavor to compete with the salsa.

People worldwide eat insects for two reasons. First, it's cultural and carries on from earlier times. Second, they have to get protein from somewhere and insects are the best option. As global resources become tighter and population continues to grow, insects may play an increasing role in global diets. Their efficiency and ability to truly not compete with edible grains or other crops makes them economically attractive – cultural norms may need to change as meats in particular become prohibitively expensive. Entomophagy may be the next frontier in eating further down the foodchain.

Terry Miesle



September SFC meeting—Chicago



Chemicals Sources Association and Society of Flavor Chemists meeting

The ChemSources meeting started with a presentation on Heat Management by Paulina Costas and Shane McDonald of Kalsec.

At the SFC meeting, Vice-President Mary Foster discussed the Society’s LinkedIn site and how members can post jobs or browse for jobs (see next page)

Next, Chef Homaro Cantu discussed several initiatives by the (Charlie) Trotter project. One is a global focus group. Restaurant patrons are randomly selected from restaurants around the world to use a cell phone app to rate various attributes of their restaurant dining within 40 minutes of eating. This will be used to find out what is important to customers and uncover new trends.



He then talked in depth about miracle berries, which essentially can make sour items taste sweet. After letting a miracle berry pill dissolve on my tongue, I bit into a lemon slice and it was sweet like lemonade. The hope is that people could consume less sugars and still satisfy sweet cravings as part of a health initiative. He then described more unconventional ideas, like an indoor composting so people could grow more of their own produce and reuse items that would normally be trashed. Also, technologies that would allow people to eat more healthy or environmentally sustainable diets. Examples include making a hamburger that looks and taste like hamburgers



made from grain and hay, french fried and catsup

How to Find a Job Opening the SFC LinkedIn Website

When you are looking for a new position in the flavor industry, we encourage you to browse our listings in our LinkedIn web page. Mary Foster has developed instructions on how to find a job opening with screen shots. Go to the the SFC Linked-in website, go to www.flavorchemists.org and look at the "Contact Us" drop down menu, or go directly to:

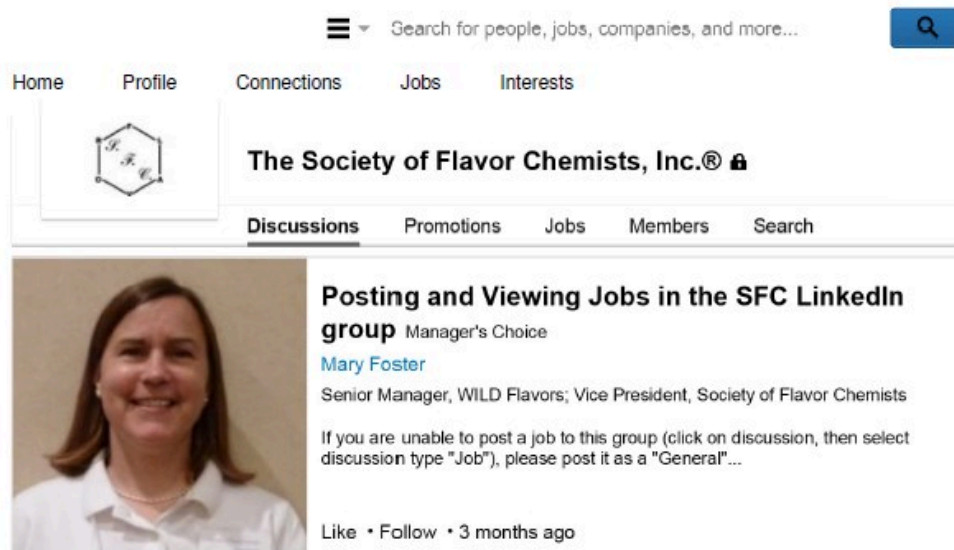
<http://flavorchemists.com/job-posting-information>

Written instructions on how to post a job on the SFC LinkedIn web page:

1. From your LinkedIn home (or any other) page hover your cursor over "Interests" to open a drop-down menu. Click on "Groups." (Be sure to scroll all the way to top of the page to make this menu bar visible.)
2. On your Groups page click on "The Society of Flavor Chemists, Inc." link. (NOT the Members Only group link.)
3. At the SFC group page, click on "Jobs."
4. Some posted jobs will appear on this page (You may also post a job or share a job on this page.)
5. Also check the "Job Discussions" page for additional job listings.

The Society of Flavor Chemists, Inc.® | LinkedIn

<https://www.linkedin.com>



Is your company looking for talented entry-level flavorist trainees?

Dennis Kucharczyk, Mentoring Committee co-chair, has a the number of BS and MS Food Science graduates looking for entry level training positions. If you are interested, please contact Dennis at dennisk@comcast.net

Flavor Symposium

October 8-9, 2014

Flavor Symposium (Jersey City, NJ)

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This year's flavor symposium was a great success. The sold out event had two hundred participants and over thirty presenters.

It was held in the confines of the Liberty Science Center in Jersey City, NJ.

Giving an overview of sixty years of the flavor industry, Jeb Allured-Gleason of Perfumer&Flavorists showed advertisements and photographs from the magazine over the decades, and discussed the changing trends and innovations. Kay Murano of IFF followed with an interactive presentation of creative use of flavor materials. JD Vora of Mane continued with a discussion of the different types of natural extracts and why a flavorist should use them. Tony Moore of Flavor Producers also discussed natural extracts with respect to organic flavors and ingredients.



2014 Flavor Symposium

After the break, Hedy Kulka (IFF) and Cindy Cosmos (Bell) shared some of the tricks of the trade such as solvent selection to ensure homogenous and stable solutions of flavors. Don Karenewsky of Synomix talked about his company's technology of sweet taste modification. The next presentations by Daphna Havkin-Frenkel and Faith Bellanger (both of Rutgers) discussed vanilla the challenges behind a sustainable vanilla industry.

After lunch, Frank Fischetti ("retired") was given free rein to discuss his philosophy of flavor creation. This was followed by Kent Zeller (consultant) and his presentation of chiral effects of flavor molecules, Brian Grainger (retired) discussed high impact flavor compounds. Colin Ringleib (Blue Moon) presented on natural botanicals.

Hamish Taylor of Symrise gave a passionate account of how to maintain a sustainable supply of high quality vanilla beans by working with local farmers in Madagascar.

Equally enthusiastic was Bob Sobel of FONA and his talk on delivery systems and encapsulation.



2014 Flavor Symposium

The next day continued the discussion on encapsulation with a presentation by Ron Skiff of Firmenich.

This was followed by a spirited panel discussion by (left to right) John Wright, Dolf DiRovira, Karl Holmgren, Bob Peterson, Mike Fasano, and Pat McNamara.. One member observed one big difference over the years was the contrast between the members of this veteran panel and the current (all female) SFC Board of Directors.



John Cox of FEMA discussed the challenges of the flavor industry in a world of Social Media, and the difficulty of science and industry perspective being heard over the bloggers like The Food Babe.

Mary Raukko (Firmenich) , Kathleen Crossman, (FONA) and Laura Hopkinson (IFF) discussed the changes in Regulatory over the decades and the ever increasing expectations of the customer.

Neil DeCosta of IFF discussed the use of Analytical in duplicating flavors, giving the example of work he did with chili peppers.

Rutgers Professor Qingrong Huang discussed the application of nanoemulsions, such as the preservation of citral in functional beverages.

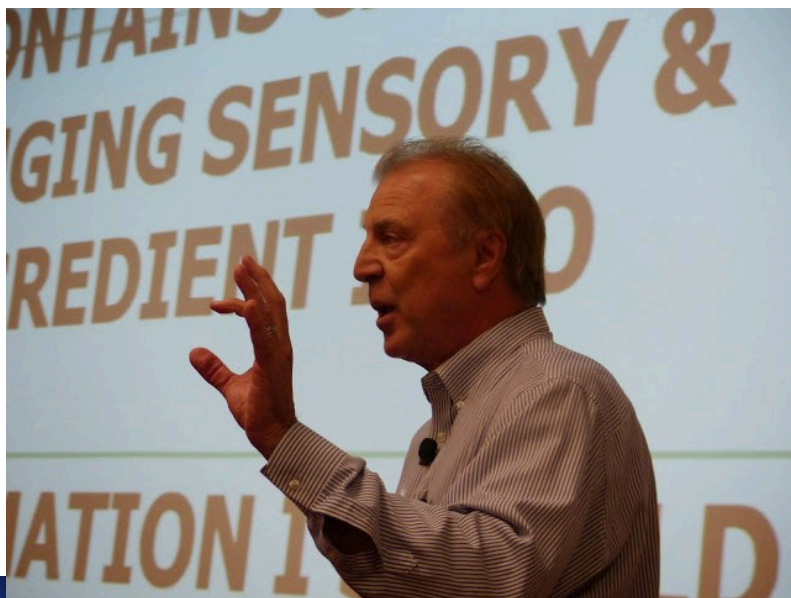


No, this is not the Food Babe!

2014 Flavor Symposium



The author Steven Witherly gave an exciting presentation of why humans like junk food. It turns out that people are wired for nutrient dense food, sugar, and salt. So, losing weight is a struggle against our own genetics.



The 2014 Society of Flavor Chemists Symposium Committee

November SFC Meeting — Newark, NJ



The November meeting was well attended with over 50 attendees. It started out with a ChemSources meeting. Steve Wang of Aromens International talked about amino acids and reducing sugars, and their role in reaction flavor. Benoit Nicol of IFF showcased “fresh, natural” ingredients and tasted them in beverages.

At the SFC meeting, Elsa Howard reviewed the overall process for nominating and testing candidates for induction to the SFC. Many candidates are intimidated by the interview process, so Cathianne Leonardi discussed the interview process, and what to expect. The role of the sponsor was described by Glenn Mangarelli, and talked about the responsibilities of the sponsors and the requirements to adequately prepare candidates. Finally, Nicole Fernandez, a newly inducted member, told us her training secrets.



Sustainability

According to the National Restaurant Associations 2015 Culinary Forecast, three of the top ten “hottest” culinary trends are sustainability issues. Specifically, in third place environmental sustainability, in eighth place seafood sustainability and in ninth place food waste reduction and management. As trendy as these issues are, the term “sustainability” turns out to be vague and unclear. Two cover articles in *Perfumer & Flavorist* (1,2) discuss sustainability without defining it. Wild Flavors (now a division of ADM), describes sustainable management as a “means to co-ordinate and harmonize economic and ecological targets,” which it also terms eco-efficiency: “improved added value through less employment of resources.”

While researching this hot trend, some definitions that were found include:

- Givaudan’s 2013 Sustainability Report “we see to develop a business that protects the environment, sources materials in a responsible and sustainable way, used materials and energy efficiently, creates a safe environment for employees, an advances the social and economic conditions of the communities in which we operate”. The Givaudan sustainability program has five pillars:
 1. Responsibility in raw material supply to preserve the environment, stimulate development and well-being of communities and safeguard the efficient use of resources
 2. Employees—recruit and retain professionals that are passionate and proud of their work and are empowered to contribute to a sustainable society
 3. Innovation and development of sustainable creations
 4. Operational excellence without compromising the environment or the health of employees and the communities
 5. Working with customers and markets to market products that promote the general well-being and health of the planet.
- Ottens Flavors stresses sustainability over five areas: reducing negative impacts on environment; increasing their positive impact on the lives of employees, customers, suppliers, and communities; promotion of total awareness of consumption of resources; and continuous improvement 5
- Wild Flavors (now a subsidiary of ADM) discusses sustainability as it impacts customers, employees, suppliers, the environment, the community, and industry.
- Kalsec describes is sustainability program as “developing environmentally sound processes which highlight the three “r’s”: reduce, reuse, and recycle. (Kalsec) commits to programs that meet the needs of the present without compromising the needs of future generations.

1 Sustainability 2020. 2013. *Perfumer & Flavorist* V 38(7) pp 30—33

2 Matsumura, K and M Emura. 2014. Sustainability in flavor and fragrance ingredients. *Perfumer & Flavorist* V 39

Sustainability (cont'd)

An excellent demonstration of sustainability in food flavors was presented at the recent SFC Symposium. Symrise flavors wanted operational excellence, a steady supply of quality vanilla beans, but to do that, they ensured that there were farmers in Madagascar who are willing and able to grow those beans and maintain the quality desired. Symrise accomplished sustainability by paying a relatively price for the beans, but they would only purchase high quality beans. To ensure high quality, the company hires teachers and agricultural consultants to educate farmers on how to grow the best beans. In turn, farmers work to avoid soil erosion and deforestation, so the environment is preserved.

Farmers often have cash flow problems, since the money for the beans comes at a different time than when rice crop needs to be planted. Often farmers will sell green beans at lower cost in order to earn money to plant rice. Symrise, in its efforts to promote operational excellence and maintain healthy communities, offers micro-loans to farmers so they can plant rice and wait to sell vanilla beans until they are fully ripened. The company also supports farming communities by hiring teachers to educate the children in an effort to discourage child labor.

But, why would a flavor company want the burden of sustainability?

While there are definite public relations advantages to being viewed as a “sustainable” company, all flavor companies are for-profit. Are companies more likely to be sustainable if it aligns with financial advantages? The sustainability management program can significantly reduce costs of doing business while enhancing the green image of the company.

Reducing carbon footprint has the obvious advantage of reducing fuel and energy costs. Reducing waste and increasing efficiency of raw materials are excellent cost-cutting efforts that are also sustainability practices. Controlling and reducing water use is another sustainability item that makes financial sense as well. Reducing the use of hazardous materials could result in fewer employee injuries. Using recyclable packaging can reduce disposal costs.

Sustainability can even extend to the workforce. If your workforce is passionate about sustainability and the company sincere about it as well, would employees be more energetic and likely to stay at accompany that is more than a job?

Some companies tout the awards they won and organizations they belong to on sustainability. Firmenich touts the “2013 British/Swiss Chamber of Commerce Corporate Social Responsibility Award” and membership in organizations such as Union of Ethical BioTrade. Kalsec is a member of SEDEX, which is a non-profit organization that “dedicated to driving improvements in the ethical and responsible business practices in global supply chains,

Sustainability is more than a catchy buzzword for your company, it is also a fiscally prudent and vital to continued operation of the company and its supply chain. What is your company doing to be sustainable? Join this discussion on our Linked in or Facebook page.

Flavor Creation and Agricultural Sustainability

By Cathianne Leonardi

“Eat it if you want to keep it” may seem like a have your cake and eat it too philosophy towards sustainability in the food industry. However, this is the approach that Patrick Martins, founder of Heritage Foods USA and Slow Food USA, openly suggests as a viable option to sustainability. The idea is that if delicious foods are tended to, consumed and enjoyed, there will be a market increase for the desired product. The act of eating boosts demand for propagation and distribution.

To keep an eye on agricultural items that have strong regional or cultural connections and/or those that may become endangered, Slow Food USA has issued an Ark of Taste. The Ark is a focus on items that should be tended to and consumed in the hope of increasing availability or expanding geographical popularity.

Included in the Ark is the Dancy Tangerine, a citrus varietal that once held popularity for its pliable skin and fresh fruity taste. Only a few short years ago its oil was commercially available for use in the flavor industry. It has since declined in numbers not for lack of deliciousness but for its soft skin and disposition to host fungal growth. It is an example of an appreciated taste paired with detrimental growth and distribution issues.

Surprisingly, its cousin the Pixie Tangerine, *Citrus reticulata blanco*, is also listed. It enjoys a thicker skin and easier prosperity of growth. Because of its taste desirability paired with comparatively easier distribution and reproducibility, it is often the type of tangerine citrus oil available for use as a flavoring material.

As both tangerine items are found on the Slow Food Movement’s Ark and have been used in food flavorings, one might determine that the flavor industry has a hand in promoting agricultural sustainability. Further proof exists when one considers suppliers to the industry work to identify items that satisfy taste expectations, legislative and cost controls, availability, reproducibility and sustainability.

Suppliers to the flavor industry are also focused on improving availability of sustainable flavoring items. They are keenly aware that if consumers eat it, volumes rise. This is where the goals of the Slow Food Movement’s Ark and suppliers of flavoring material find agreement.

Rosewood Oil (Bois de Rose) was listed under Appendix II for endangered species under CITES (Convention in International Trade) control. Its major component is linalool, a common item used in fruit and floral flavors. To ensure safe and long term production of Rosewood Oil, Berje, a flavor and fragrance supplier, is working to produce an alternative essential oil that is distilled from the collected leaves and twigs of the Rosewood tree, rather than the wood from the trunk of the tree. This alternative distillation has created a more sustainable product as the leaves and twigs can be collected without the cutting of the entire tree, protecting the Rosewood trees.

Other approaches within the industry aligning with agricultural sustainability include flavoring items such as vanilla (Firmenich, Givaudan, IFF, Symrise), lavender (Givaudan), rose and lemon verbena (Symrise).

Expect the Unexpected

Susie Bautista

The oddest call I had from a customer was a complaint that the double strength flavor he received was bitter and unpalatable. He ignored the specification sheet sent with dosing instructions and evaluated the flavor in his usual manner: by tasting a spoonful. How can a flavor manufacturer and flavor chemist control what a customer chooses to do with a flavor?

Flavors must be used by food and beverage manufacturers as intended to be considered FEMA GRAS. It can be argued that it is essential to know how a customer uses a flavor. Under section 201(s) of the Food Drug and Cosmetic Act (FDCA), substances added to food are subject to pre-market approval unless substances they are considered GRAS (generally recognized as safe) by experts under their conditions of intended use.

Historically, GRAS substances have caused food safety concerns because they were not used as intended. For example, as a result of consumer letters to alcoholic beverage companies using caffeine. In these letters, FDA stated that they have not made a determination regarding the GRAS status of use of caffeine in alcoholic beverages.



Historically, GRAS substances have caused food safety concerns because they were not used as intended. For example, as a result of consumer letters to alcoholic beverage companies using caffeine. In these letters, FDA stated that they have not made a determination regarding the GRAS status of use of caffeine in alcoholic beverages.

Currently, there is little regulatory oversight on assuring that FEMA GRAS substances are used safely and as intended. Will FSMA preventative control rules demand that a flavor companies establish protocols on communicating intended use to their customers? Do flavor chemists have the toxicology and food safety knowledge to know the limits of safe use of all FEMA GRAS materials? Should flavor manufacturers increase the training demands for certified flavor chemists and other staff that develop flavors to include basic toxicology and food safety?

It is important to start talking about this now, because our customers are interested. In August of 2014, the Grocery Manufacturers of America (GMA) announced that it is taking initiative to assure the safety of food additives. GMA is doing this by providing seed money for the [Michigan State University's Center for Research on Ingredient Safety \(CRIS\)](#). GMA, FDA and NRDC (Natural Resources Defense Council) went on NPR (National Public Radio) in September of 2014 to discuss food additives and GRAS regulations. The NPR segment was titled "The growing use of food additives and new pressure for more oversight". FDA's spokesperson, Michael Taylor, agreed "there is a legitimate set of questions being raised about FDA's system of oversight and if people can have confidence in it".

In conclusion, FEMA GRAS substances are only safe if there is reasonable certainty that the substance is not harmful under the intended conditions of use. Preventative controls in the development of flavors for food products intended for consumers may assure a safer food supply.