XXXIX INC WORLD CONGRESS

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The INC is the international umbrella organization for the nut and dried fruit industry and the source for information on health, nutrition, statistics, food safety, and international standards and regulations regarding nuts and dried fruits.

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The 39th World Nut and Dried Fruit Congress, held from May 11–13, 2022 in Dubai, was, without doubt, a success. More than 1,100 participants from 64 countries gathered at the luxurious Madinat Jumeirah Resort to discuss the industry’s most pressing topics like how to stimulate demand and consumption, create a sustainable system in which farmers are adequately compensated, and navigate a strained global supply chain.

I would like to thank all of the hard work that the Organising Committee, led by Ashok Krishen, put into this event, as well as the work from the INC Secretariat team, led by Goretti Guasch. I also want to thank the entire Board of Trustees, the Executive Committee, and all INC Committees for their continued dedication to our industry, which was evident by the success of the Congress. Turning to the 2023, I am excited to announce that the 40th World Nut and Dried Fruit Congress will be held in London, UK, and the Organising Committee will be Chaired by Giles Hacking.

As the industry continues to face an imbalance in supply and demand and shipping constraints in part to tariffs, the INC has engaged in discussions with the World Trade Organization and the United Nations. The aim of these discussions is to express how the adverse tariff situation has and continues to inhibit the global shipment of nuts and dried fruits and creates further obstacles for the sector’s efforts to rebalance supply and demand across the globe.

I am also pleased to announce that the INC Executive Committee will gather once again in October 2022 for a Strategic Planning Meeting at the INC HQ in Spain. This meeting will set the path for the INC over the coming years and identify key projects which will be implemented. Moreover, at the same time as this meeting, the INC HQ will host Nuts 2022. This meeting will bring together the world’s brightest researchers on the health benefits of nuts and dried fruits to set top research priorities and goals for the future.

As was mentioned during the Congress in Dubai, the INC has approved a multi-year, country-specific dissemination campaign, targeting Gen Z consumers and encouraging consumption of nuts and dried fruits. The campaign is set to begin in China, as the Chinese Gen Z market presents a significant growth opportunity, following an INC-conducted study. Later, the campaign will be adapted and spread into further high-growth markets like India and Latin America. This plan will help increase global consumption and will serve as an integral part of addressing the industry’s needs.

Just before the Congress in Dubai, the INC wrapped up the 2022 edition of the INC Academia On-site Course. Held in Naples, Italy, this unparalleled learning experience continued to offer students the opportunity to see the nut and dried fruit industry up close, and once again showed why it is the premier learning opportunity for the sector. I would like to thank Pino Calcagni, Chairman of the INC’s Sustainability, Scientific and Government Affairs Committee, for hosting part of this year’s On-site Course.

And lastly, the INC Pavilion will be present at SIAL Paris, this upcoming October. The first edition of the Pavilion in Paris since 2018, the relevance of the INC Pavilion site as an industry hub keeps growing. I encourage all of you who will be in Paris to visit the INC exhibitors, meet the INC executive and spend time with fellow INC Members.

I look forward to seeing you all in Paris and thank you for supporting the INC.

Yours sincerely,

Michael G. Waring, INC Chairman
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What inspired you to get into the culinary world? How did you decide you wanted to be a chef?
I grew up in a large family that enjoyed gatherings centred around amazing food. As the eldest child of parents who were hawkers in the 90s, I was always tasked to help with preparing the food for both family gatherings and crowd-favourite Malay dishes, like Nasi Lemak & Mee Siam, that we sold at my parent’s food stall.

Seeing how hard it was to run a food outlet when I was a kid was something that initially intimidated me and kept me from pursuing cooking seriously. However, I found myself being drawn back to the kitchen when I enrolled in a culinary program during my time in high school. Meeting the right mentors along the way enabled me to see the potential I had, and the rest, as they say, is history.

How would you describe your cooking style? Which cuisines inspire you and are interesting to you?
I don’t have a specific cooking style but the techniques I use in my cooking are heavily influenced by my background of having been trained in classical French & modern European kitchens while growing up in an Asian household that was always surrounded by food.

At its core, I believe in serving straight-up good food without all the bells and whistles. I love for the ingredients and food to speak for themselves.

I’m now researching and going deeper into South East Asian flavours and heritage recipes. I’m also intrigued by traditional cooking methods, one of which was the inspiration behind 11 Woodfire, my latest restaurant in Dubai with a menu focused on woodfire cooking.

You previously were the Head Chef for famed restaurant Iggy’s in Singapore, and you have also opened up several more restaurants such as 3 Fils, which in 2022 topped the list as the #1 restaurant in the Middle East & North Africa. What does this recognition mean for you?
It means everything. It may seem like a fairytale but I’ve worked really hard in the last 20 years, so the recognition is an affirmation that I’m doing something right. While I have gone through a lot to get here, I’m blessed to have people around me who have constantly believed in me and pushed me harder with each new project I take on. Ultimately, I’d like to persevere and take on new challenges; the best is yet to be.

When a customer enters one of your restaurants, what is the dining experience that you aim to provide?
I believe in creating an experience even before a guest has stepped into the restaurant—they should feel excited to visit. This could be because of what they see on the menu or what they’ve heard from friends who have visited.

In the restaurant, the service, ambience and food must go hand in hand in creating a memorable experience. Who doesn’t enjoy a genuine interaction with their server while having good food in a comfortable environment?
Health is an increasingly important topic for consumers and nuts and dried fruits are loaded with health benefits, so how do you use nuts and dried fruits in your restaurants? We use nuts in various dishes from appetisers to desserts in all of my restaurants. A crowd favourite at Goldfish is the Lamb Satay, which is served with a chunky peanut sauce while pecans are used in 11 Woodfire’s signature dessert, Dark Chocolate ‘Bone Marrow’.

Dried fruits play an integral part in the beverages we serve at my restaurants. We use them for various infusions and they’re also a great addition to the tea trolley experience we have in 11 Woodfire.

What can nuts and dried fruits bring to a dish? What reasons do you like to use nuts and dried fruits when cooking?
I love how versatile they are and can help elevate a dish, be it sweet or savoury.

Nuts add texture and their oils can add a depth in flavour to an otherwise ‘boring’ dish. Dried fruits are great in salads and I also love pairing them with cured seafood.

What is next for Chef Akmal Anuar? What can you share about any projects that you are working on for the future?
I’m all about taking on the unknown. I’m in the midst of opening a contemporary Asian restaurant called 53 in New York City right now. Back at home base in Dubai, my boutique consultancy firm, White Rice, is working on a few new exciting projects slated to open in the next year in and around the UAE. Stay tuned for updates!

QUICK-FIRE ROUND!
What do you enjoy the most about being a chef?
Meeting new people and getting inspired by our conversations.

What is your personal favorite dish with nuts or dried fruits?
I simply enjoy snacking on nuts — peanuts, almonds, walnuts, you name it.

What is the next big gastronomical trend in the world?
A larger focus on vegetables and sustainable eating.

What nuts and dried fruits do you always have in your kitchen at home?
Hazelnuts & Dates

Lamb Satay with Peanut Sauce
Makes 25 skewers

Lamb Satay:
- 1000g Lamb Rump, sliced into small cubes
- 10g Ground Coriander Seeds
- 10g Ground Cumin Seeds
- 10g Ground Fennel Seeds
- 15g Lemongrass, finely chopped
- 15g Fine Salt
- 190g Brown Sugar
- 180ml Water

1. Toast ground coriander, cumin & fennel seeds until fragrant.
2. In a large mixing bowl, combine all ingredients and leave lamb to marinate for at least 4 hours.
3. Skewer the lamb pieces and set aside.

Peanut Sauce:
- 400g Skinless Peanuts
- 150g Shallot
- 18g Dried Red Chili
- 40g Galangal
- 75g Lemongrass
- 40g Garlic Clove
- 225g Tamarind, dissolved in water
- 200ml Coconut Milk
- 250g Fine Sugar
- 15g Fine Salt

1. Toast the peanuts until golden brown. Leave to cool.
2. Once peanuts are cooled, roughly blend the peanuts to a chunky consistency. Set aside.
3. Blend shallots, dried red chili, galangal, lemongrass and garlic into a paste.
4. In a saucepan, heat oil and fry the paste until fragrant.
5. Combine the tamarind, coconut milk, sugar, salt & chunky peanut in the same saucepan. Cook over medium heat for 10 minutes and set aside until ready to serve.

To Serve:
1. Grill the lamb skewers over charcoal until cooked through and evenly charred.
2. Serve hot with warm peanut sauce.
New Technologies for Insect Infestation Detection and Disinfestation

Insect infestation has become an important problem for the food and agricultural industry. Infestation in tree nuts occurs during processing, handling, shipping and storage and can cause an estimated 3-4% loss in product and economic value. It also forces producers to use toxic fumigation chemicals. Chemical fumigation during storage is not only costly, but it also poses risks to workers’ health, the environment and food safety. Therefore, avoiding or reducing insect infestation and related treatments will help minimize food loss and improve sustainability.

Currently, there is no commercially-available technology for detecting and monitoring insect infestation activities in the postharvest stage. Most infestations are found by hand, but by the time humans can see it, it’s often too late, and the damage has already been done. Our research at UC Davis showed that insects could damage almond kernels quickly and significantly. In one example, a red flour beetle infestation at a 1% ratio (1 insect per 100 almond kernels) reached 17% after only two weeks.

It is therefore important to develop new technology that can detect the insects as soon as they emerge and monitor their activity. Without this information, there is no way to determine the appropriate timing, dosage, and effectiveness of fumigation and potentially reduce its use.

At UC Davis, we have developed a smart wireless technology to detect insects early, which will soon be commercially available through AiVision Food Inc. The system catches insects as they emerge, takes photos and counts the number using an image processing algorithm. It then sends a notification to facility managers through a mobile device so they can take the necessary steps toward disinfestation. It also records the environmental conditions such as temperature and relative humidity (RH), which are closely related to product quality and insect infestation. The device can be placed in products held in packages, storage bins, containers and stockpiles to help growers stop an infestation early.

DR. ZHONGLI PAN

DR. ZHONGLI PAN IS AN ADJUNCT PROFESSOR IN FOOD ENGINEERING AT THE UNIVERSITY OF CALIFORNIA, DAVIS (UC DAVIS), AND FOUNDER OF AIVISION FOOD INC. HIS RESEARCH FOCUSES ON NEW FOOD AND AGRICULTURAL PROCESSING AND POSTHARVEST TECHNOLOGIES FOR SUSTAINABLY PRODUCING HIGH QUALITY, NUTRITIOUS, HEALTHY, AND SAFE FOODS. HE IS AN INTERNATIONALLY RECOGNIZED LEADER AND OUTSTANDING FOOD ENGINEER AND SCHOLAR IN THE FIELD OF FOOD AND AGRICULTURAL PRODUCT PROCESSING ENGINEERING WITH MORE THAN 30 YEARS OF DISTINGUISHED SERVICE IN ACADEMIA, GOVERNMENT, AND INDUSTRY. ZHONGLI IS A FELLOW OF AMERICAN SOCIETY OF AGRICULTURAL AND BIOLOGICAL ENGINEERS, AND FELLOW OF INSTITUTE OF FOOD TECHNOLOGISTS.
The technology has recently been demonstrated at more than ten agricultural processing and storage facilities in California for different products, including almonds, walnuts, and rice. We showed that it was capable of detecting insects in under 30 minutes, where human inspection was not able to find them at all. Insect infestation also occurs during harvest and drying. Most tree nuts—particularly almonds and walnuts—are harvested by shaking and letting them dry naturally on the ground for one to two weeks. Through a study at multiple almond orchards over the last three harvest seasons, we found that the insect infestation rate increased from 2% to 4.2% during this process and caused significant damage to almonds; the insect-damaged almonds have only about one-tenth of the value of undamaged products.

In addition to insects, these harvesting and on-ground drying practices can damage crops through wet weather and contamination from the soil, and cause environmental pollution by generating a large amount of dust. That’s why the Almond Board of California has been supporting research to develop alternative harvesting and drying methods that can benefit the entire industry.

One approach is off-ground harvesting, commonly known as shaking and catching, but it has not been widely used for almonds. Due to their high moisture content, they need to be dried quickly to prevent spoilage and quality loss. Sun-drying off-field is an option, but it may not be feasible due to the large quantity of almonds produced in California. To solve this problem, as well as disinfection, our lab has been developing alternative high-temperature drying methods that are both efficient and high-throughput.

Since the hulls of tree nuts have much higher moisture content than the shells and kernels, we developed a new sequential infrared and hot air-drying method to quickly heat the surface layers while keeping the kernel at a relatively low temperature. Keeping kernels at low temperatures is important for maintaining product quality, particularly for walnuts. Our studies with walnuts showed that this method can reduce drying time and energy use by up to 20%.

Almonds have a higher heat tolerance than other tree nuts, so we developed a two-step heated air-drying method for them. The system uses high-temperature air between 80-90°C for one to two hours, followed by low-temperature drying at around 60°C. This new method significantly increased the drying rate and reduced drying time while killing insects in all different forms. This means high-temperature drying can not only improve drying rate and throughput, but it can also reduce or eliminate the need for fumigation treatment right after harvest.

With the emergence of these new technologies that can be applied to a variety of products, the agricultural and food industry can become more sustainable and contribute to a healthier world.

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Insects were detected in almonds at a processing facility with AiVision Food technology

![Smart insect catching trap](image1)

- Carton box without plastic liner
  - 3 days
  - 7 days
  - 45 days

![Smart insect catching trap](image2)

- Fiber bin
  - 5 days
  - 25 days
  - 45 days
Country/Product Spotlight

USA & Peanuts

This Country Product Spotlight is the eighth in a series of industry and market overviews in the Nutfruit magazine. This report provides a snapshot of the peanut industry in USA, with data, analysis, and trends.

We would like to thank the American Peanut Council and Dr. Samara Sterling, Research Director for the Peanut Institute for their collaboration in this edition.

Industry Highlight
An overview of production, trade and consumption

Eating Peanuts and Peanut Butter for Brain Health
Understanding the health benefits of peanuts

Health Info Graphic and Recipe for Peanuts
Learn how to include peanuts in your daily diet

New Product Launches
Insights into new products that utilize peanuts
It is still too early to accurately estimate the incoming autumn crops in the Northern hemisphere. Supply figures for 2022/2023 are an early forecast. Some of the following crop estimates and forecasts are based on the INC Dubai Congress roundtables; others have been updated since the Congress. The INC will continue updating the statistics in next issues of the NutFruit magazine and newsletters.