

NEWS FROM THE WORLD OF SPICES



WORLD SPICE ORGANISATION

March 2024

From the Chairman's Desk

Greetings from World Spice Organisation!!!

Continuous discussions and deliberations are vital to stay relevant in the ever evolving landscape of global spice trade. It is in this regard that the significance of events like the International and National Spice Conferences (where the spice stakeholders gather under one roof to connect and keep abreast of the latest industry developments) can never diminish.

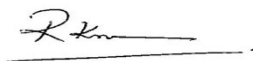
The grand success of the recently concluded seventh International Spice Conference (ISC-2024) conducted by All India Spices Exporters Forum in Gurgaon, India validates the importance of such events. The event discussed multiple topics of interest ranging from Sustainability Interventions and Supply chain challenges to Value addition and Food safety regulations. Experts from the industry, regulatory bodies and research institutes participated in the deliberations and we are sure that the delegates have benefited a great deal from this.

Training programs and field visits in connection to the National Sustainable Spice Program (NSSP) are ongoing. We have plans to expand the program to cover more farmers and more locations in the near future. We are also considering including soil testing services and a Mobile Application for farmers in the gamut of NSSP activities. Involving more private companies in the program and offering them access to sustainability solutions and sustainably produced goods is also under consideration.

More details on the discussions held at the International Spice Conference and NSSP Activities are given in the Newsletter.

As always we look forward to your continued support to achieve our objectives of Food Safety and Sustainability in Spices.

Warm regards,



Ramkumar Menon

National Sustainable Spice Program

Four Trainings of Trainers were conducted in the past quarter- Two by Smile NGO in Andhra Pradesh and One each by Tharad and Chorad FPOs under Sambhav Foundation in Gujarat. A total of 150 farmers including 42 women participated in these. We also conducted field visits to 12 FPOs covering 220 farmers and 24 plots in chilli, cumin and fennel and offered advisory to farmers through organized training.



ToT at Tharad FPO, Rajasthan



Field visit at Gram Unnati FPO

As a part of private participation in the program, a delegation from M/s Verstegen Netherlands visited NSSP FPOs in Telangana to study the scope of collaboration with NSSP in sourcing of sustainably produced goods. Meetings were conducted with M/S McCormick and M/S Orkla to explore opportunities for collaborating with them in their sustainability initiatives.

Challenges in Regulations on Food safety and Pesticide residues

Challenges in food safety and pesticide regulations were discussed in detail at two business sessions of ISC 2024. The constantly evolving food safety standards and lack of harmonization of the global regulations continue to act as barriers to smooth global trade of spices.

An important development in the establishment of Maximum Residue Limits (MRLs) for pesticide residues was the adoption of monitoring data as the base for establishing MRLs. Codex adopted this method way back in 2002 owing to the insufficient field trial data available with the member countries. They have established a number of MRLs for spices with the monitoring data shared by member countries including India and these MRLs were extrapolated to generate limits for other spices belonging to that particular crop sub group.

In 2017, US approved the use of monitoring data to generate Import tolerances, but not regular tolerances. The American Spice Trade Association (ASTA) was able to generate a number of Import tolerances in spices by working closely with EPA. Apart from this, US also has a program to use the data from JMPR reviews or the reviews done by the national authorities of other countries to establish Import and regular tolerances in the US. A pilot program was successfully conducted from 2016-2023 based on the use of data from the sources mentioned above and without the use of field trial data. This option of using external data is also codified in the Pesticide Act of US and this highlights the importance of information sharing among countries as the data generated elsewhere can be used to establish tolerances in the US.

India currently does not approve label claims based on monitoring data. However, Central Insecticide Board & Registration Committee (CIB&RC) is taking a sympathetic stand towards spices and has agreed to consider data generated over one year and two locations to establish label claims. We are awaiting a final decision on this matter.

Currently, the tolerances, crop grouping, dehydration factors, methods of analysis and the protocol for establishing MRLs vary from country to country. Global harmonization of standards and regulations will go a long way towards solving the issues faced by the industry and organizations like Minor Use Foundation are working towards this goal and helping in establishing more Codex MRLs.

Apart from the pesticide residues, the presence of Mineral Oil Hydrocarbons in spices and the impractical limits set by the EU for Mineral Oil Saturated Hydrocarbons (MOSH) has become a major concern and could be a major impediment to trade to the EU since the Ethylene Oxide issue. As it is difficult to identify the sources of Mineral oil hydrocarbons owing to the possibility of naturally occurring hydrocarbons in spices, limits of 0.5ppm and 1 ppm for foods with fat/oil <4% and >4% respectively and 2 ppm for fats or oils may be difficult to achieve. The issue is exacerbated by the lack of capability of Indian labs to test for MOSH and MOAH and high expenses associated with sending samples overseas for analysis purposes. WSO has requested the Spices Board to develop the facility to test MOSH and MOAH in the Quality Evaluation Labs of the Board as this will save time and expenses .

The impact of land transfer policy on sustainable agricultural development in China

At present, China's agricultural development presents problems such as increasingly tight constraints on water and soil resources, increased pollution in the process of agricultural production, and noticeable degradation of agricultural ecosystems. So, it is urgent to promote the sustainable development of agriculture.

From the perspective of land transfer policy, based on the panel data of 30 regions in China from 2006 to 2020, this paper uses the entropy weight method to calculate the level of sustainable agricultural development. Based on the analysis of the impact mechanism of land transfer policy on sustainable agricultural development, the relationship between land transfer policy and sustainable agricultural development is empirically tested by the continuous difference-in-difference method.

The study found that the overall level of sustainable agricultural development in China is relatively low but shows an upward trend. The land transfer policy significantly promoted the sustainable development of agriculture in China. This conclusion is still valid after a series of validity tests and robustness tests. Finally, the corresponding policy suggestions are put forward according to the theoretical analysis and empirical results.

Future research will focus on indicators challenging to quantify in agricultural sustainable development and find effective methods to incorporate them into the indicator system. [Read more](#)

Sustainable Agriculture Gets a Push From Big Corporations

For decades, agriculture has been the climate elephant in the room. Now, some governments and a handful of major corporations are making inroads in turning farming toward more earth-healthy practices.

Forestry, agriculture and land use are responsible for around a third of global emissions—nearly 10 times the damage done by aviation. Farming also has a significant negative impact on biodiversity, freshwater resources and deforestation.

But unlike aviation, there are currently research-backed, cost-competitive ways to farm more sustainably. Regenerative or climate-smart agricultural methods could capture significant carbon dioxide from the atmosphere as well as improve soil health, biodiversity, resilience and farm economics.

Recent farmer protests drive home why politicians have shied from decarbonizing agriculture: Farmers are frustrated with increased regulations, lower-cost imports and squeezed livelihoods, while they can also be hit by extreme weather, biodiversity loss and environmental degradation.

Regenerative agriculture isn't one-size-fits-all, but rather a location-specific choice from practices including growing cover crops, reducing tillage, crop rotation and agroforestry. After an initial three- to five-year transition period, these methods increased farmers' long-term income by up to 120%, according to a study from Boston Consulting Group. Tom Crowther, professor at Swiss university ETH Zurich, said experts estimate the soil can capture around 100 to 120 gigatons of CO₂ from the atmosphere. [Read more](#)

Agricultural technology innovations are powering the sector's sustainability shift

Agricultural technology firms are playing a pivotal role in fostering more environmentally friendly and socially responsible practices in the agricultural sector.

The push towards sustainable farming practices is driven by various factors, including climate change concerns, regulatory changes, and consumer preference for organic or regeneratively grown food products.

These practices offer economic benefits to farmers, such as improved soil health and productivity, reduced water use, and enhanced resistance to climate variability and extreme weather events.

The shift away from harmful synthetic chemicals towards environmentally friendly alternatives is notable in the fertilizer space.

Synthetic fertilizers, while crucial for maintaining soil fertility and maximizing crop production, have several downsides. These include environmental pollution via leaching into groundwater or runoff, soil degradation, loss of biodiversity, nutrient imbalance, and an energy-intensive manufacturing process contributing to greenhouse gas emissions.

Agricultural technology, or AgTech, firms like Alberta-based Replenish Nutrients Holding Corp (CSE:ERTH, OTC:VVIVF) are driving innovation in fertilizers to address these challenges. The company produces regenerative fertilizers comprised of its proprietary blend of elemental sulphur, pure rock phosphate, Canadian-sourced potash, and micronized organic matter. [Read more](#)

Patchwork food additive bans undermine US food safety regulation, warns NCA

--- A plethora of proposals calling to ban various food additives is proliferating across the US as proponents like NGOs, advocacy groups, activists and some media attempt to push for prohibitions across a range of chemicals and individual states.

The recent flood of state-level proposals has increased after [California](#) became the first state to ban four additives (red dye No. 3, potassium bromate, brominated vegetable oil and propylparaben) last October because of their potential link to health issues like cancer and behavioral problems in children.

The last five months have seen a wave of copycat proposals. Following California's adoption of a food additive ban, Illinois, New York and Pennsylvania are among a handful of states currently considering almost identical proposals.

Indiana, Maryland, South Dakota, Washington and West Virginia have rejected similar bills because the proposals lack scientific basis. In the same vein, Kentucky legislators recently passed a resolution acknowledging that food safety decisions should be based on facts and driven by those with regulatory expertise.

According to the National Confectionery Association (NCA), the proposals erode the FDA's well-established regulations governing a range of food additives used across multiple food applications. The trade body calls upon the government agency to step up action against a wave of what it claims is "misinformation" and "falsehoods," which are driving an anti-government narrative that threatens to dismantle science-based, nationwide food regulation. [Read more](#)

68 PFAS ‘Forever Chemicals’ Found by Scientists in Food Packaging Worldwide

What does Climate Smart Agriculture mean for India?

New [research](#) by environmental scientists with Switzerland’s Food Packaging Forum Foundation has uncovered 68 [per- and polyfluoroalkyl \(PFAS\)](#) “forever chemicals” in [food packaging](#) — including [plastic](#), [paper](#) and coated metal.

Used by manufacturers for decades in products like nonstick cookware, [water-repellent clothing](#), stain-resistant fabrics, [cosmetics](#), firefighting foam and [food](#) packaging, more than 12,000 of the human-synthesized chemical compounds are known to exist, according to the study.

“There are thousands of these chemicals,” said [Birgit Geueke](#), co-author of the study and a senior scientific officer with Food Packaging Forum, as [New Scientist](#) reported. “We wanted to get a picture of what is known about the presence of PFAS in food packaging.”

Scientists have discovered that PFAS have [adverse health impacts](#), leading to many being banned. Recent research has demonstrated that the toxic substances can migrate into food.

“Due to their unique chemistry, PFASs have enabled convenience in many parts of modern life. However, their molecular properties have also granted them hazardous properties, including persistence, raising alarms due to their ubiquitous presence as contaminants in food, [drinking water](#), and the environment,” the researchers wrote in the study. “Today, various PFASs have been identified in sera from humans and [wildlife](#) globally. [Read more](#)

As a response to this need at a global scale, the concept of climate-smart agriculture was first introduced by the Food and Agriculture Organisation (FAO) in 2010 to ensure food security and achievement of developmental goals. It had three main objectives: One, to sustainably increase food security by increasing agricultural productivity and incomes; two, to build resilience and adapt to climate change; and three, to reduce or remove greenhouse gas emissions where possible. This agricultural system links directly to several UN Sustainable Development Goals — no poverty, zero hunger, and climate action, with an implicit focus on gender equality. This is imperative in the Global South, with its high livelihood dependence on agriculture and heightened focus on adaptation to climate vulnerability.

India, too, has taken active measures to address its agricultural challenges in a warming world—both at the national and state levels. As early as 2011, India launched the National Innovations in Climate Resilient Agriculture (NICRA) to tackle climatic variability by developing improved production and risk management technologies such as pest-resilient and draught-resistant crop varieties and carbon sequestration through the use of biochar. Then the National Mission on Sustainable Agriculture from the National Action Plan on Climate Change was operationalised in 2014-15.

It promotes context-specific agricultural practices by focusing on soil health management, improved water-reuse efficiency, optimal chemical use and crop diversification. Programmes such as the Odisha Integrated Irrigation Project for Climate Resilient Agriculture, Maharashtra’s Project on Climate Resilient Agriculture have been promoting climate-resilient technologies. [Read more](#)

PM KUSUM: Empowering Farmers with Solar Energy Solutions

Food allergen labeling: To exempt or not to exempt

In a bid to revolutionise energy access and agricultural practices, the Uttar Pradesh government has unveiled ambitious plans to harness solar power for irrigation purposes through the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM KUSUM) scheme. This initiative, designed to cater to the energy needs of the state's burgeoning agricultural sector, aims to install over 30,000 solar photovoltaic irrigation pumps across Uttar Pradesh.

This initiative aims to provide free electricity to farmers. The target is to achieve 2000 MW capacity of solar energy in [Uttar Pradesh](#) by 2027. Approval for 2000 private on-grid pumps in Kusum C-1 has already been granted, and subsidies of 90 percent are available for all farmers, with up to 100 percent subsidies for economically weaker communities. Uttar Pradesh New and Renewable Energy Agency (UPNEDA) has received 5000 applications for solarization of private on-grid pumps in Kusum C-1, with plans to solarize 2000 private metered on-grid pumps. This not only reduces power losses for the Power Corporation but also provides substantial benefits to farmers.

According to recent budget announcements (2024-25), the state government has allocated a substantial budget of Rs 449.45 crore for the implementation of the PM KUSUM Yojana, marking a significant increase compared to previous fiscal allocations. The plan underscores the government's commitment to promoting clean energy alternatives while addressing the pressing energy demands of Uttar Pradesh's farming communities. [Read more](#)

Do all processed foods and ingredients derived from foods known to cause allergies need to be labeled as such, even though allergen-causing components of the foods may have been altered during processing?

The ad hoc joint FAO/WHO expert consultation on risk assessment of food allergens released part 4 report that addresses this question and describes a framework for government authorities or food business operators to consider when or if exempting these foods from allergen labeling would be acceptable.

Allergens in foods are primarily made up of proteins. When foods are processed or refined, the protein structure of the original food may be destroyed, denatured, or changed such that the allergenicity of the resulting food derivative is significantly decreased, potentially making it safe to consume, even for people with allergies to the original food product. In order to determine if these food ingredients and derivatives are safe, the quality of data that available on the topic and the outcome of exposure assessments of all the intended ingredients must be considered.

The experts developed a flow chart-based tool that can be used in determining if consumer safety is maintained in the face of labeling exemptions of different food ingredients and derivatives of priority food allergens. This tool was validated for derivatives already approved by countries or regions, for which there is an established history of safe consumption. Moreover, the tool can be used for any future development and evaluation of derivative exemptions, with review by competent national authorities. In brief, "When safety is established, exemption can be justified." [Read more](#)

UK FSA Seeks Public Comment on Food and Feed Considered High-Risk for Import Controls

The UK Food Standards Agency (FSA) has opened a public consultation on amendments to assimilated Regulation 2019/1793, which applies a temporary increase of official controls and special conditions to specified food and feed of non-animal origin that is imported to Great Britain from specified countries. Specifically, the amendments pertain to the regulation's annexes, which list high-risk food and feed of non-animal origin subjected to enhanced border controls.

Most food and feed of non-animal origin can be imported into the UK without additional, enhanced controls. However, imports of higher-risk food and feed of non-animal origin from specified countries can only enter the nation through appropriately designated Border Control Posts (BCP) where official controls are undertaken, including documentary, identity, and physical examinations such as sampling. A high-risk product is food or feed that is identified as either a known or emerging risk, or because there is evidence of widespread, serious non-compliance with UK agrifood chain legislation. These risks and noncompliances may be due to the presence of pathogens, contaminants, and toxins.

[Read more](#)

FSSAI looks to train tea planters to help reduce pesticide levels

Tea planters in the country are being sensitized and trained to reduce pesticide levels in tea, the Food Safety and Standards Authority of India (FSSAI) said in a statement after conducting such a workshop in Coonoor district of Tamil Nadu.

A session was held on Friday to ensure safe and hygienic production of tea and strengthen awareness on the basics of integrated pest management and good agricultural practices for tea, the food standards watchdog said. "It was supported by the Tea Board and Confederation of Indian Industry Food and Agriculture Centre of Excellence," it said.

There have been reports in the past when both international and domestic buyers rejected consignments due to excessive presence of pesticides and chemicals. The food regulator has been working on a plan to rectify this and training tea growers is a part of it.

The training included information on maximum residue levels for pesticides and measures to keep the harmful chemical within that range.

"Wide ranging discussions were held which included insights into FSSAI notifications on Maximum Residue Levels (MRLs) for pesticides, emphasizing the importance of maintaining a recommended time gap between pesticide spraying and tea leaf plucking" the statement said.

[Read more](#)

In Egypt, FAO leads an evaluation of the national food control system

Earlier this month, FAO began an assessment to improve the food control system in Egypt. The 6.4-million-euro project, "Strengthening of Capacities and Governance in Food and Phytosanitary Control" project, funded by the European Union (EU) since December 2021, is providing technical support and working with Competent Authorities and other leading institutions in 12 African Union member countries to build up capabilities, strengthen governance and improve strategic planning around two main components: food safety and plant health.

Following a recent extension granted by the EU, Egypt has become one of the two additional beneficiaries of the project, alongside Djibouti.

The project, co-signed by the Government of Egypt, falls within the Sanitary and Phytosanitary (SPS) Policy Framework for Africa developed by the African Union (AU) to spur trade among AU Member States and is implemented in close collaboration with the African Commission Division for Rural Economy and Agriculture (AUC DARBE).

Similarly to the other eight countries that have undergone the assessment, a team of food safety experts from FAO will collaborate closely with local Competent Authorities or food safety and relevant stakeholders to evaluate the effectiveness of Egypt's food control system and develop strategies to improve the country's public health and economic development. So far, a total of eight countries have successfully concluded the food control system assessment. [Read more](#)

Clean energy and biodiversity engaging in a delicate balancing act

The urgency to combat climate change has never been more acute, with the dual crises of biodiversity loss and the pressing need for clean, renewable [energy sources](#) at the forefront of environmental concerns.

However, the paths to address these issues often intersect in complex ways. A pivotal study conducted by researchers at the [University of California, Davis](#), sheds light on this intersection, specifically focusing on the delicate balance between developing renewable energy projects and protecting the habitats of threatened and endangered species in the southwestern United States.

Clean, renewable energy meets wildlife

At the heart of the study, published in *Nature Climate Change*, is an innovative approach that integrates renewable energy siting maps with the habitat ranges of two emblematic species: the climate-sensitive Joshua tree and the federally endangered [San Joaquin kit fox](#).

The findings are sobering, projecting a significant loss of habitat for both species by 2070 due to climate change alone, under a moderate emissions scenario. Joshua trees stand to lose 31% of their habitat, while kit foxes face an 81% reduction.

Moreover, when factoring in the impact of both existing and proposed renewable energy projects, additional losses of 1.7% for Joshua trees and 3.9% for kit fox habitats emerge.

[Read more](#)

New initiative aims to curb the toxic impacts of agriculture

- Ecuador, India, Kenya, Laos, Philippines, Uruguay, and Vietnam have joined forces to reduce the environmental impact of the agricultural sector
- Highly hazardous pesticides and plastic waste from agriculture release toxic persistent organic pollutants into the environment, also harming human health
- \$379 million initiative will realign financial incentives to prevent the use of harmful inputs in food production

The governments of Ecuador, India, Kenya, Laos, Philippines, Uruguay, and Vietnam have come together to launch a \$379 million initiative to combat pollution from the use of pesticides and plastics in agriculture.

Chemicals play a crucial role in farming, with nearly [4 billion tons of pesticides](#) and [12 billion kg](#) of agricultural plastics used every year.

Despite their benefits for food yields, these chemicals pose significant risks to human health and the environment. As many as [11,000 people die](#) from the toxic effects of pesticides annually, and [chemical residues](#) can degrade ecosystems, diminishing soil health and farmers' resilience to climate change. The [opening burning of agricultural plastics](#) also contributes to an air pollution crisis that causes [one in nine deaths worldwide](#).

[Read more](#)

India's food safety regulator working on stricter rules for health supplements

The Food Safety and Standards Authority of India (FSSAI) is working on making regulations for nutraceuticals and health supplements more stringent after it found many non-compliant products in the market, said officials.

Nutraceuticals are products derived from food sources that are believed to provide extra health benefits, besides the basic nutritional value found in foods, and can be available in the form of pills, syrups, capsules, powders, gummies and chewables.

"The popularity of these products has increased manifold as consumers have become more health conscious," said a senior FSSAI official, who did not wish to be identified. "We want to make the standards more stringent for the safety of consumers."

The authority had received several complaints about many non-compliant health supplements being sold in the market, according to the official, after which it conducted a drive across the country to check nutraceuticals and health supplements for quality and safety throughout their manufacturing and sale process.

The issue was discussed by the scientific panel of the food authority recently, the official said, adding that due to the availability of health supplements over the counter, there are chances of consuming multiple nutrients whose action might be antagonistic to each other.

[Read more](#)

Scaling sustainable food production in face of climate change is the defining challenge of our times

In July 2023, Dasra, a strategic philanthropy organisation, along with think tank Observer Research Foundation (ORF) launched a report titled *Our Uncommon Future: Intersectionality of Climate Change and SDGs in the Global South*, which explores the impact of climate change on Sustainable Development Goals and on food insecurity and malnutrition.

The report found that there is a critical need today to not only treat food insecurity as a humanitarian crisis but to also address how climate change is reducing agricultural productivity by precipitating the frequency of extreme weather events.

The report by Dasra and ORF also recommended nature-based solutions and adaptation to address the impact of climate change. This approach could not only help us protect our environment and preserve natural resources but also explore sustainable ways to uplift traditionally marginalised farming communities.

Links between traditional agriculture, biodiversity and economy

[Read more](#)

Sri Lanka on course for GI stamp on Ceylon Spices

Sri Lanka is beginning to become more concerned about branding its traditional products with a traceability of its origins like pepper, clove and nutmeg following on from the successful implementation of Ceylon Cinnamon.

As part of the process of replicating the Ceylon Cinnamon Geographical Indication (GI) in other products, Sri Lanka has now opted to start the process of GI certification of its spices and in this respect will be converting the Cinnamon Trading Academy to the Spice Trading Academy, Head of STDF (Standard and Trade Development Facility) Melvin Spreij said at a recent discussion on the 'way forward with GI in Sri Lanka' at the Water's Edge, Battaramulla.

He noted that with many of the spices originating in Sri Lanka replicating the GI certification for other key spices like pepper, cloves and nutmeg are vital.

It was pointed out that since GI certification was obtained for Ceylon Cinnamon there has been an expansion of the business in other countries as a result of this indicator.

In this respect, the EU will be looking at ensuring the required standards are achieved by the producers as they will be engaged in supporting partners in meeting these requirements, EU Head of Cooperation Dr. Johann Hesse said.

[Read more](#)

World Spice Organisation, C/o All India Spices Exporters Forum, MM NO. VIII/121 (A), Jayanagar Road, Kannadikadu, Maradu - 682304, Ernakulam, Kerala, India. Phone: +91 9895354110. Mail : secretary@wsospice.org, technical@wsospice.org. Website: <http://wsospice.org/>