

# ASIAN SEED

THE OFFICIAL PUBLICATION OF THE ASIA & PACIFIC SEED ASSOCIATION

## India Hybrid Rice Tour

APSA delegation tours rice basket of South Asia

## Asian Seed Congress 2016

Review of the 23rd edition of APSA's flagship event

## Meet the 2017 EC

APSA gets new president, VP, welcomes four new members & re-elects four to the EC

## Seed for Thought

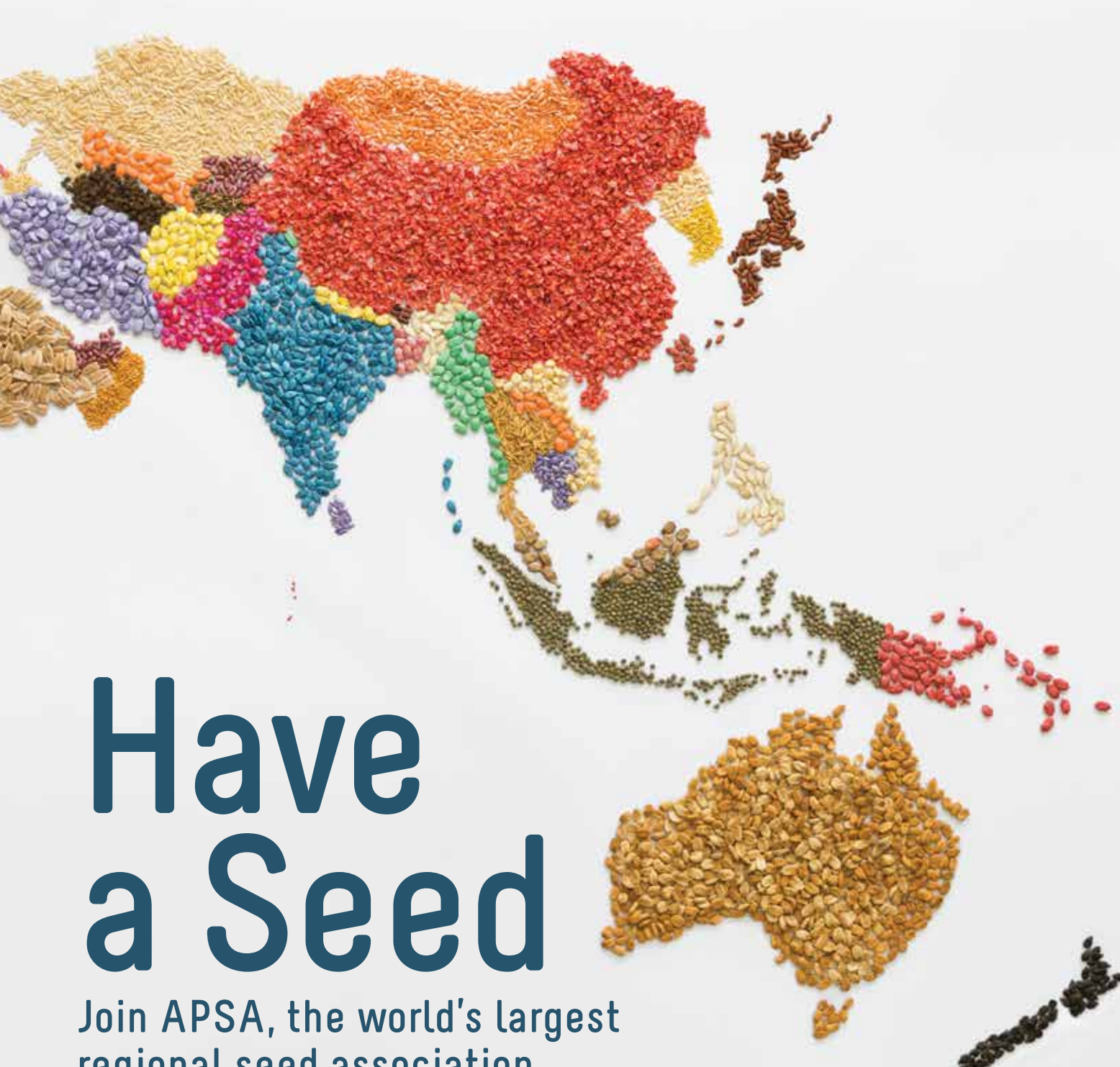
A heart-to-heart with Thai seedman, Dr. Chairerg Sagwansupyakorn

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# It's All in the Numbers

**Greetings from Australia. It is my honour and privilege to serve as APSA's 22nd President. As Mr. Zhiping Wang finishes serving his two-year presidential term, under the rules of the new constitution I now follow in his footsteps after serving as APSA Vice President for two years.**

For those of you who haven't visited Australia, it is the world's largest island. It is the 6th largest country in the world, outsized by only Russia, Canada, China, the USA and Brazil. This makes it the 2nd largest country in the Asia-Pacific Region. However, our population is only a bit over 24 million, so we rank around 53 in the world's list of countries by population for 2016. Over half of our population is located in the three major cities of Sydney, Melbourne and Brisbane, so we have many areas in the country that are sparsely populated.

For some data on Australian agriculture, I contacted Bill Fuller, Chief Executive Officer of the Australian Seed Federation. Bill recently made a presentation to the New Zealand Grain & Seed Trade Association (NZGSTA) at their annual conference held in Brisbane, Australia. He kindly shared the following with me that I now wish to share with all of you.

Of the 24 million Australians that I mentioned, of those old enough to work, about 1 in 6 are employed in agriculture. When it comes to the seed industry it is always a bit challenging to know exactly what the figures are, but Mr. Fuller believes that if you look at just the wholesale seed trade and count just the first sale of the product (not all the reselling that we know happens in our industry), then that accounts for about AUD\$500 million worth of business annually, which is approximately US\$375 million dollars.

This is pretty equally divided on a monetary basis between cereals, forage and horticultural crops. Australia imports about AUD\$80 to \$100 million worth of seeds every year and exports around that same amount. The imported seeds are primarily horticultural seeds and the exported seeds are primarily forage seeds.

I am proud to be from a country where agriculture has such an important role, and where the seed industry is a vital part of that agriculture. Furthermore, I am very proud to be in the Asia-Pacific region, where the seed industry is such an interesting mixture of traditional practices and ground breaking innovations. As your APSA President, I hope to serve you, the APSA members, along with my colleagues in the APSA Executive Committee and the APSA Secretariat, to the best of my abilities, and to help you grow your numbers and businesses for the years to come. 🌱



# Exciting Times Ahead for APSA

**My first APSA Asian Seed Congress was one of our biggest to date and I have taken all of your compliments, concerns, questions and criticisms into consideration to ensure that our secretariat continues to improve this important event for your businesses. We would like to thank our Korean partners again for their excellent organisation this year and, as a result, the closer ties we all now have to the Korean seed industry.**

Back at the office, we have been really busy preparing and launching our new website and membership database. This has involved a lot of checking and double checking of the data in our systems, but we sincerely hope this will improve our productivity and your interaction with us here at APSA. As we unveil these systems, we hope you will all login and update the new information fields available in order to improve your profiles and allow us to know more clearly the type of seed business your organisation is or is involved with. Our Membership Officer, Bobbie, will be using this new system to manage APSA's January 1st renewals for the majority of our members.

Our Communications Officer, Steven, has been extremely active in sourcing interesting news about our industry and posting on our website and social media pages. We hope you are enjoying his photos from congress and his updates on the happenings at APSA and the industry in general.

On 7 December we signed a consortium agreement with the World Vegetable Center (formerly known as AVRDC). The Director General of the centre, Marco Wopereis, and I signed this agreement at a dinner hosted by both organisations, attended by important stakeholders for this agreement,



The APSA and WorldVeg Consortium was signed on 7 December in Bangkok.

here in Thailand. The details on this consortium, which will be of interest to our companies involved in plant breeding, can be found in the news section of our website.

We also look forward to our Asia Solanaceous Round Table II (ASRTII) here in Bangkok, 23-25 February in partnership with Kasetsart University. Our Events Manager, Jim, is making sure the event will run exactly according to plan and that our guests will find the event enjoyable. Meanwhile our Technical Director, Dr. N. K. Dadlani, is ensuring an informative and cooperative programme which will encourage superior participation from the scientific community. The morning sessions are free for student admission to allow young seed men and women the chance to attend the presentation sessions. All presentations and discussion sessions will be conducted in English.

The new and current Chairs and Co-Chairs of the APSA Special Interest Groups and Standing Committees are organising their first meetings to plan their activities for 2017. They have some exciting activities planned

for next year already, including more expert consultations on phytosanitary measures in the Asia Pacific Region, a second intellectual property workshop and a study tour to visit seed production facilities in France.

Looking further ahead into the future, our Events Manager, Jim, and I are planning visits to the Philippines to facilitate your 2017 Asian Seed Congress, with the intent to have this one be the best yet. We have even started planning for the 2018 Congress so that our members can be better prepared for their annual visit to APSA, which will be done by having much earlier communication from our office on upcoming events and activities.

I cannot tell you often enough how much we appreciate your feedback. We hope that you will complete the survey we emailed you about ASC 2016, and we look forward to using this information to improve our event in 2017. As always, if you have questions, concerns, suggestions, or if you need our help, please call or email us at the secretariat. We would be delighted to hear from you. 🌱





## Thai Princess Takes on UN Zero Hunger Role



Her Royal Highness Princess Maha Chakri Sirindhorn was appointed in October as Special Ambassador for the UN's Food and Agriculture Organization's Zero Hunger by 2030 campaign. The appointment was announced on 17 October at the UNFAO's regional office in Bangkok as part of an event to mark the official observance of World Food Day 2016. Presiding over the event, HRH Princess Sirindhorn presented agriculture innovation awards on behalf of UNFAO to five "Model Farmers", namely Alfred John Sayaham from Fiji; Oyunchimeg Yadam from Mongolia; Aun Mohamed Khan Leghari from Pakistan; Dilok Pinyosree from Thailand; and Pham Thi Huan from Vietnam.

## Beijing Seed Congress Booms with Business



General Manager of Beijing Biosow Seeds Mr. Zhang Xiaosheng holds up a new pumpkin variety, with Ms. Shuping Ma, Deputy Director of China's Bureau of Seed Management, MOA, looking on.

More than 300 million RMB (about US\$ 73.6 million) is estimated to have been generated through business deals at the 24th Beijing Seed Congress held in October in the Chinese capital. The annual event was held in the Oriental MGM hotel in Fengtai District from 19-21 October. Attending the event, APSA's outgoing President, Zhiping Wang, reported that some 300 new plant and seed varieties were shown at the exhibition, which hosted 544 booths for traders and field exhibitions, in addition to 68 premium booths and 369 booths for hotels.

## All About the Good Genes



The World Vegetable Center (AVRDC) in Chinese Taipei is among a handful of organizations leading a € 6.9 million initiative to catalogue genetic 'blue prints' of the world's potatoes, tomatoes, peppers and eggplants. The European Commission funded project, dubbed G2P-SOL 2016-2021, is a global research alliance grouping 19 full and 20 associated partners from 12 countries worldwide. Meanwhile, the People's Republic of China's first national gene bank formally launched operations on 22 September at its site in Shenzhen. Also referred to as CNGB-Shenzhen, the facility has been developed over the past five years and will be operated by the Beijing Genomics Institute (or BGI-Shenzhen).

## Planting Seeds of Smart ASEAN Agriculture



On 1 November, APSA Director Heidi Gallant met with Dr. Suwit Chaikiattiyos, the Director-General of Thailand's Department of Agriculture under the Ministry of Agriculture and Cooperatives, along with other DOA section and division chiefs, to discuss plans for future collaboration. Among the topics covered were the establishment of the Asean Seed Hub and collaborating on future editions of the Asian Seed Congress. On behalf of the DOA and Thai government, Dr. Suwit expressed the desire to empower farmers with technical training in seed technology and smart agriculture, to which APSA promised to work closer with the DOA moving forward.

## USAID-Sponsored Bangladeshi Agro Inputs Group Visits APSA



The meeting covered AIRN and APSA common challenges and goals.

Representatives of the Agro Inputs Retailer Network (AIRN), and Agro Inputs Project (AIP) in Bangladesh, took an eight-day study course in September for "Agri-business and Quality Inputs" in Thailand. The course visited APSA's Secretariat office at Kasetsart University's Bangkok campus, where they met with Director Heidi Gallant and Technical Director Dr. N. K. Dadlani to discuss the plans and goals of APSA, AIRN and AIP Bangladesh. The tour was sponsored by Washington-based Cultivating New Frontiers in Agriculture (CNFA) organization, which is supported by the US Agency for International Development (USAID).

## AIB Awarded for Fight Against Plant Piracy



The Anti-Infringement Bureau for IP Rights on Plant Material (AIB) was presented with the 2016 award for Outstanding Public and Private Partnership in the Fight against Intellectual Property Piracy. The award is handed out annually by the International Intellectual Property Crime Investigators College (IIPCIC), operated under INTERPOL and Underwriters Laboratories (UL). It was presented to Managing Director Casper van Kempen at the Tenth Interpol/UL IP Crime Conference in London in recognition of AIB's outstanding commitment in its fight against intellectual property rights (IPR) crimes.

# India Hybrid Rice Study Tour

At the end of September, APSA led 23 delegates on an enriching study tour through key paddy-producing states of India. Organised from 25 September - 5 October, APSA's Hybrid Rice Study Tour to India brought together regional seed experts and enterprise representatives keen to get a hands-on update on the hybrid rice situation in the world's second most populous country.

The study tour was technically a continuation of APSA's hybrid rice tour of China in August last year, when the

association led a group of 15 through the heart of the world's most populous country's "hybrid-rice basket", visiting cutting-edge farms and facilities in Hunan, Hubei, Anhui and Sichuan. As it so happened, 80% of the China study tour delegation represented Indian seed enterprises. And so it was only fitting that more than 80% of this year's hybrid-rice study tour in India represented Chinese seed enterprises.

Indeed, 19 of the 23 delegates joining the latest tour were from Chinese firms, namely Winall Hi-Tech Seed, Fujian Kehui Seed, Anhui Longping High Tech

Seed, Jiangxi Modern Seed, Hunan Golden Rice Seed, Beijing Kings Nower Seed S&T, Hunan Hoping Seed, Anhui Lixiang Seed and Hefei Fengle Seed

Aside from the three representatives from APSA's Thailand-based secretariat – Executive Director Heidi Gallant, Technical Director Dr. N. K. Dadlani and Communications Officer Steven Layne – the India hybrid rice tour delegation also had the pleasure of welcoming back Kennrick Glenn G. Magdangal, President and CEO of Tilah Corporation in the Philippines, who had also been on the China trip.

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## India Impressions



The delegation convened on 24 September in the bustling Indian capital of Delhi. It was to be the first impression of India for most of the delegates. Home to some 20 million people, the greater metropolitan of Delhi is a northern Indian hub for all types of raw goods, with thousands of tons of fresh and dried produce traded in its markets every day. A bulk of these goods are transported from neighbouring states – Haryana, Uttar Pradesh, Rajasthan, Himachal Pradesh, Madhya Pradesh, and even as far away as Punjab and Bihar. And some of it is grown and harvested within Delhi itself, with the agriculture department estimating some 28% of Delhi land marked off for agricultural purposes, including for the cultivation of wheat, barley, maize, paddy and potatoes.

After getting settled at their hotel in New Delhi, the APSA delegation wasted no time in getting down to business and meeting some of the key drivers of India's agriculture sector. A serious round table discussion was held at the Ministry of Agriculture, where the delegation had a good opportunity to gauge lucrative investment opportunities in India. Particularly luring was when Raman Kant Mishra, the Indian Government Additional Commissioner of Seeds, enticed the delegates with India's FDI friendly policy, which technically allows for foreign firms to have 100% ownership and, under certain circumstances, qualify for subsidies.

Back at the hotel, the delegation had more informative discussions following a presentation about the Indian hybrid



rice situation by Dr. J. S. Chauhan, Asstt. Director General (Seeds) at the Indian Council of Agricultural Research (ICAR). More discussions were held to conclude the day with a networking dinner hosted by Bayer India Pvt. Ltd, represented by Vice President of Agriculture Policy and Stakeholder Affairs, Rajvir S. Rath. The special guests in attendance included J.S. Sandhu, Deputy Director General of Crop Sciences Division at ICAR (formerly Agriculture Commissioner at the Ministry of Agriculture); DharmPal Malik, Additional Commissioner (Crops) at the Government of India; Dr. R. R. Hanchinal, Chairperson of the Protection of Plant Varieties and Farmers' Rights Authority; as well as several reps from the Indian Agriculture Research Institute and from private seed enterprises.

Looking forward to a change of scenery from the bustling Delhi congestion, the group was eager to venture out into the heart of Uttar Pradesh to visit one of the (new) seven Wonders of the World, the Taj Mahal in the city of Agra, on day two of the APSA India hybrid rice study tour. But the first order of business: fragrant rice production. After several hours of driving from Delhi, the delegation stopped to visit a basmati rice field in Mathura, just outside the city of Agra in Uttar Pradesh state, where they were blessed and fed in traditional Hindu custom. They were then given a presentation by executives of Dayal Seeds (P) Ltd on basmati rice varieties and got to examine paddies of the 2511 variety.

## World Wonder



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## Rural Raipur

APSA's India hybrid rice study tour delegation were up bright and early to beat the Delhi traffic and catch their flight to Raipur, Chhattisgarh, where they were welcomed by the energetic and progressive team at VNR Seeds PVT LTD, who led the just-as-eager group on a tour of VNR's seed testing and processing plant near the village of Deorjhal. This was followed by a field tour of the leading Indian firm's main research and development farm in Kohdia, in the district of Durg, where many hybrid varieties of rice, vegetables and fruit are grown, studied, tested, developed and perfected before being introduced into the market. Mr. Vimal Chawda, VNR Seeds Managing Director, mentioned that the focus of VNR (which stands for 'Vegetable N Rice') Seeds is now on promoting hybrid rice seed production and cultivation in Chhattisgarh state.

The next day the delegation visited a number of commercial and research OP (inbred) and hybrid rice farms, courtesy of CABI, Bayer India Pvt. Ltd, VNR Seeds

Private Limited, and Savannah Seeds Pvt. Ltd. Joining the morning tour of test fields, Dr. Kavya Dashora, Deputy Director of Science for CABI's New Delhi office, emphasised the importance of crop management and best practices in optimising paddy yields. The Bayer – CABI experiment demonstrated an effective Direct Seeded Rice (DSR) system for improving rice productivity, and also serves as a preliminary experiment for economical hybrid rice production attainable by local farmers.

During the afternoon visit to Savannah Seeds Pvt Ltd's Research Farm in the District of Dhamtari, delegates learned a great deal about the challenges facing the Indian Hybrid Rice sector. Senior Rice Breeder Dr. Amaresh Chandel summarised some of these:

"It is difficult to breed for all different segments. The inbred rice market is very big in India and hybridisation is less than 10% as of now, so there is lot of scope to improve the rice yields by way of

developing high yielding and high quality hybrid products, Seed production is also a challenge as cultivable land is decreasing and input costs are increasing, hence there is a need to keep the cost of goods low as India is a price sensitive market and it is difficult to increase cost price. So to be competitive, companies usually try to keep COGS low and increase seed production yields.

Dr. Chandel explained that hybrids have not been able to break the yield barriers and farmers have not yet seen any significant yield advantages with regards to inbred varieties.

"Grain quality is also an issue as hybrids are generally considered to be poor compared to inbreds. Efforts need to be done in enhancing the grain quality of hybrids. Hybrids are generally tall and prone to lodging, and also there is chaffiness (empty grains) in grains, so there is need to develop lodging tolerant and low chaffy grain hybrids" he said.



## ESSENTIAL INDIAN ARITHMETIC & SEASON CROP TALK

Anyone doing business in India is advised to familiarise themselves with the unique system of reference for numbers and seasonal crops. First, one should get used to calculating costs in Indian Rupees (INR), which has seen a volatile exchange rate in recent years, ranging from 53 INR to the USD (Jan 2013)

to 68 (Nov 2016). Next, learn to use and understand number references, including the unconventional placement of commas in their numbering system: "Lakh" (1,00,000 or a hundred thousand); "10 Lakh" (10,00,000 or a million) and "Crore" (1,00,00,000 or ten million) and "Arab" (a billion), et al.

Finally, there are two main types of crops: Rabi crops (sown in winter, harvested in spring) include wheat, oat, potatoes and peas, among others; and Kharif crops (cultivated and harvested during monsoon season) refer mostly to rain-dependent paddy, millets and corn.





## Hybrid Hub

The study tour concluded its final days in and around Hyderabad, in the State of Telangana, which is considered a hub for agriculture research, especially in respect to hybrid rice. During their stay in Hyderabad, the group gained a wealth of knowledge and business contacts courtesy of Nuziveedu Seeds Ltd, Kaveri Seed Company Ltd, Gubba Seed, Ganga Kaveri, Dupont Pioneer and the Indian Institute of Rice Research.

In Hyderabad, participants were exposed first-hand to progress and breakthroughs in Indian hybrid rice R&D, seed production systems, seed conditioning, and seed quality assurance processes and advanced seed storage systems, including for special germplasm storage. Moreover, the delegates got to interact with seed merchants at the Medchal Seed Market, following a leisurely day off to mark Gandhi Jayanthi.

In a statement supplied to Asian Seed after the tour, the executive team at leading hybrid rice enterprise in China, Longping Hi-tech – authored by Mr. Zhixin Qing, Mr. Peizhong Miao, Mr. Zhenhua Yi and Mrs. Juying He – underlined some of the challenges and opportunities they observed in India's Hybrid Rice market.

"India is a leader in the world for planting area of rice, with more than 4.2 million hectares dedicated to paddy, even though hybrid rice is a very small portion at the moment".

"Unlike China, India faces more challenges with private-public cooperation in developing and commercialising new varieties. Likewise, the public sector support of rice research is behind China, which continues to have more advanced R&D. However, one major advantage in India is the lower cost of labour, which we estimate to be about half that of China. We thought the tour was very useful and significant – we got loads of useful information on the Indian Hybrid Rice market and learned a lot. We were also touched by the spirit of the whole delegation's cooperation, who were all eager to learn".

Kennrick Glenn G. Magdangal of Tilah Corporation also came out with new insights. "I have learnt a lot of new things about the Indian seed industry and, more so, have been inspired by the people, from breeders to policy makers to marketers, and most especially, to the rice farmers themselves".

"One specific takeaway is the lessons from the high degree of specialisation amongst the players and varying degrees of cooperation in the industry".

Kennrick explained that before joining the tour, he had the impression that India was one huge single market for rice seeds. However, he found out otherwise during the tour.

"There are many segments and sub-segments in this market which has naturally given opportunities not

only for a few, but for many industry participants. I like the way one seed company has put it: 'there's a space for everyone' in the Indian seed industry". Strategising on how best to enter the Indian hybrid rice market, the team from Hefei Fengle Seeds – Mr. Xianfeng Chen and Mr. Zhaorui Tang – offered some suggestions.

"We see a lot of potential in the Indian Hybrid Rice market in the coming 5 to 10 years, but there are some challenges to overcome. As the Indian Government restricts the import of seeds from China, Chinese seed companies who wish to sell seeds in the Indian market will need to cooperate with local Indian seed companies. At the same time, the three-line HR breeding level in India is almost the same as China's, so we don't have obvious advantages".

"Moreover, China's Ministry of Agriculture restricts the export of the two-line parents... We were shocked by the Indian HR status and breeding level during the tour, and delegates from Longping & Winall would like to suggest to the MOA to remove the export restrictions".

The executives suggested that support from the Chinese National Seed Association would prove pertinent in working with Chinese and Indian officials in setting up a hybrid seed market and variety testing facilities within India, helping Chinese enterprises work around the trade restrictions by assisting advanced hybrid varieties locally. 🌱



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# More Than Just PVP: Pre Congress Workshop



**Dozens of delegates packed into rooms 116 and 117 of the Songdo Convensia Convention Center on the morning of 7 November for the first official meeting of the 23rd Asian Seed Congress. The Pre-Congress Workshop this year was titled “Plant Variety Protection and Seed Industry” and this very important title, topic and theme would set the tone for the rest of Congress.**

Chairing the morning session was outgoing APSA President Mr. Zhiping Wang, with Ms. Heidi Gallant, Executive Director of APSA, co-chairing the session, which was moderated by Dr. Anthony Tse of Clover Seeds. After brief introductory presentations by the five panellists – Dr. Mary Ann Sayoc (East West Seeds, Philippines); Dr. Paresh Verma (Bioseeds, India); Mr. Madoka Koshibe (Japan Seed Trade Association); Dr. Dehua Ma (China Seed Association) and Mr. Michael Keller (ISF, Switzerland) – a round table discussion was held, allowing members of the audience to question the panellists.

Whilst differentiating Plant Variety Protection (PVP) issues as unique from other IPR categories (patents and trademarks, for example), the morning discussion gravitated around agreeing on key PVP messages and audiences.

“We are preaching to ourselves here,” said Anke van den Hurk of Plantum (Netherlands), “We agree, or mostly agree, on what needs to be done. My question to the panel, then, is how can we relay these messages to others?”.

An outspoken Mr. Keller underlined what he sees as the key message.

“When we talk about UPOV and other [seed variety protection] systems, what we are really talking about is choice, a value-added proposition. We are not imposing [PVP] on the farmer – they can continue as they always have. We know from samples that new varieties can increase the livelihood of the farmer. For me that’s the starting point”.

Dr. Mary Ann Sayoc pointed to the need for facilitating more PVP discussion between and among key decision

makers in the public and private sectors through regional-scale workshops, citing strong cohesion in the Philippines, which was ranked top in the region by the World Bank in its Enabling Business in Agriculture study.

“We, the seed companies, need to have a better story to tell” she said, “and we need to be ready to engage with members of civil society to relay the message that what we are doing is not anti-farmers, but is actually doing a lot for small farmers too”.

Mr. Koshibe echoed the notion to emphasise the farmers as a talking point and target audience. “If you look around this room, most of us here are PVP specialists. I have worked closely with government officials as part of the East Asia PVP forum for over a decade, and I can say that they are mostly aware of PVP laws and activities. But it’s the farmers we need to address more”.

He stressed the importance of farmers’ income as the driving force. After all, “If the income of farmers is increasing, then they will definitely choose and



maintain our [the seed breeders’ and companies’] varieties”.

Harmonisation of national and regional laws was also stressed as a key talking point. Dr. Paresh pointed out that despite ambiguities resulting from drawn-out legislative processes, in the case of the Indian seed laws, notification and judicial precedent ultimately can result in more clarity for all.

On harmonisation, he underlined the merits of regional economic agreements. “If you are granted PVP registration in Singapore, for example, it is my understanding that that registration would be applicable in other ASEAN countries [in accordance with the ASEAN Economic Community multilateral free trade agreement], and you wouldn’t necessarily have to register the variety in each individual country”.

Providing context from China, Dr. Dehua Ma suggested that seed companies and breeders need not only depend on legislation and judiciary protection. He explained that up until recently in China, there was no dedicated seed laws or

breeding centres, and farmers acquired parent lines directly from government research and extension stations. After the Seed Law came into effect in 2000, farmers were forced to become more independent in producing new seeds, which proved perilous for many small companies, especially those that did not have breeding programmes.

Over time the situation improved as many Chinese companies established breeding programmes. But he warned “If you go to China, you must protect your varieties through your own [innovative and technological] measures, not only through the law”.

Asia’s legislative and judiciary branches are relatively behind Europe and the Americas, as we learned in the afternoon session with a new panel focusing on implementing agencies.

Moderated by Francois Burgaud (GNIS, France), the session’s hot seats were occupied by Mr. Casper van Kempen (Anti Infringement Bureau, Belgium), Dr. Arvind Kapur (Chair, SC – IPR&BD), Mr. Thanh Minh Nguyen (Director,

PVPO, Vietnam), Mr. Thant Lwin Oo (Director, DAR, Myanmar), and Mr. Milan Kondic (World Bank, USA).

Five presentations were given which included the basics of UPOV: PVP principles by Mr. van Kempen, APSA’s Position on PVP by Dr. Arvind Kapur, the benefits of joining UPOV for PVP implementation by Mr. Nguyen, Myanmar’s preparation for an effective PVP regime by Mr. Oo, and an overview of PVP in the Asia Pacific Region according to the World Bank’s research by Mr. Kondic.

APSA members are welcome to download the full presentations on our website ([apsaseed.org](http://apsaseed.org)).

The afternoon session provided a clearer picture on the progress of PVP in the Asian region, especially in India, Myanmar and Vietnam, whose countries have many similarities, yet are each in unique stages of implementing and harmonising PVP laws.

Several highlights of the discussion are particularly worth mentioning here. One of Mr. Kondic’s slides highlighted the extremely high costs of PVP registration in Vietnam, relative to other (non-UPOV member) countries in the region, which was quickly challenged.

Mr. Nguyen suggested that the data was skewed and did not necessarily reflect PVP registration costs as a whole in his country. He assured the audience that his country does not differentiate, or discriminate, between local and foreign applicants for variety registrations as is common in many neighbouring countries.

When asked who is mostly behind PVP infringements in Asia, Casper was firm in his response.

“Forget the mom and pop operations. We’re talking about well-structured companies with strong international linkages. We’ve been investigating many PVP infringement cases in Europe for quite some time, and have brought to justice some 30 cases”.

“A few things have come to light: Strong international linkages, often with Asia, and the prevalence of organised crime in the sense that culprits are consistently cooperating with each other for profit. PVP is just one aspect. In most cases, it is linked to tax evasion, phytosanitary and labour violations – a whole cluster of illegality, which underlines the importance of our mission,” he concluded. 🌱



# 23<sup>rd</sup> Asian Seed Congress a Wrap

The Asian Seed Congress returned to the Republic of Korea for its 23<sup>rd</sup> edition from 7-11 November. It was the second time the country hosted the ASC following the 2004 edition in Seoul and it was clear that a lot had changed – in Korea and in the overall seed industry – over those 12 years, and over the 22-year history of APSA and the event as well.





**T**his year we welcomed more than 1,200 delegates representing some 50 countries across Asia and the globe. Business relations and networks were formed and forged at the hundreds of trading tables, booths and meeting rooms set up at Incheon's Songdo ConvensiA. We enjoyed

spectacular cultural performances at the Inaugural Ceremony and Grand Banquet; we voted to elect and re-elect members to our Executive Committee and ratified our position on Child Labour at the General Assembly Meeting (pp. 20-21); and a plethora of market data, technologies and intelligence were relayed at our NSA meeting

(pp. 23-24), as well as at our SIG and SC meetings (pp. 25-29). And of course, we were imparted with exclusive insight into the seed industry of the host country, including through Post Congress Tours, living up to the tradition of what makes Congress not only essential but also enjoyable for all seedsmen and seedswomen alike!



## Incheon Impresses

It was clear from day one of pre-registration that this year was going to be busier than usual, as hundreds started to turn up on 6 November to get their delegate packages early ahead of Congress' official opening on 7 November. After registration, some tended to the final touches of their booths while others went out to explore the budding business district of Songdo, escaping the chilly weather in one of the many trendy shopping venues or just

enjoying the colourful Korean autumn in one of the many parks surrounding the venue. The social scene at Congress was happening and the entertainment was top class throughout.

Congress officially got underway with the Inaugural Ceremony, which opened with a grand display of traditional Korean dance, complete with a drum and flute performance from Incheon Metropolitan City

Dance Theatre. After some awards were presented (p. 22), members of APSA's Executive Committee and the National Organising Committee (KOSA and KSVS) were all called up to the stage for a group photo before the dance troop returned for more lively engaging action. With the audience now fully captivated, Dr. Jin Young Yoon took the floor to give a comprehensive presentation on the seed industry in this year's host country.







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## All About Korea



Valued to the tune of more than a trillion won (about \$855mn) the Korean seed market is segmented into cereals (20.4%), vegetables (20.7%), flowers (13.5%), fruits (10.2%), seedlings (15.3%), seeds for medicinal derivatives (12.2%), animal feed (3.8%), and mushrooms (3.5%).

After outlining the different government administration divisions and their functions, Dr. Yoon revealed the evolution of Korea's famous high-yielding Tong-il rice, highlighting how productivity of the variety gradually rose from around 5t/ha during the 1970s, surpassing 7t/ha in the last decade. He detailed how Korean researchers and breeders not only focused on improving quantity but also quality, through the enhancement of colour, shape, scent, nutritional content and utilisation.

Dr. Yoon then went on to underline the importance public-private cooperation, highlighting several developments underway in Korea.

The Golden Seed Project is a KRW491.1bn (\$415mn) project started in 2012, which will conclude by 2021 and covers radishes, Chinese cabbages, cabbages, watermelons, hot peppers, paprika, tomatoes and onions, in addition to rice, corn, potatoes, citrus, mushrooms and lilies, which will dually benefit the respective cultivation of chicken, swine, aquatic commodities, serranidae, seaweed, flatfish and abalone.

Next Generation BioGreen 21 is another programme utilising a budget

of KRW602.7bn (\$511mn) from 2011 to 2020 for various crop-related projects, which covers plant molecular breeding, exploitation of agri plant genomes, agri bio plants for food/medicinal materials, and GM crop development.

With a 2016 touted opening, K Seed Valley is a KRW68bn (\$57.7mn) seed research complex that will be located in Gimje-si, Jeollabuk-do. This is in addition to the Vegetable Breeding Research Center being developed from 2009 to 2018, with a budget of KRW10bn (\$8.4mn), in conjunction with Seoul National University and private breeding institutes.

Dr. Yoon then presented some popular Korean-bred hybrids, including jalapeños and other disease resistant peppers, Chinese cabbages, tomatoes and Korean watermelons, to name a few. He went on to present some figures on the vegetable seed trade, which, according to KOSA, was worth about US\$115mn in 2015. Interestingly, exports – mostly including radishes, peppers, cabbages, and Chinese cabbages exported to China, the US and India – were valued at about \$45mn, compared to imports – mostly paprika, tomatoes and radishes from Japan and the Netherlands – which were worth only about \$14mn. Consistently exceeding both imports and exports was seed production and trade overseas by Korean entities (about \$55mn in 2015).

Dr. Yoon went on to highlight the dynamic trends of Korean seed companies (KOSA

members), particularly the shrinking number of smaller companies in light of mergers and acquisitions by MNCs (MultiNational Corporations), a trend that seems to be consistent across the global seed industry. He concluded by underlining various challenges and opportunities facing the seed industry, which, as became clear in all the meetings at Congress (pp. 23-29), were not unique to any one country, or any one region for that matter.

But what better way to learn about the Korean Seed Industry than a tour. This year's Post Congress Tour filled up quickly and welcomed 207 delegates representing 101 companies who were split into two programmes. The first group visited Nong Hyup Seed's Paprika Breeding Center and Koregon's Anseong Research Center, both in Anseong-si, Gyeonggi-do. Meanwhile, the second group visited Asia's Biotechnology Breeding Institute in Icheon-si, Gyeonggi-do, before proceeding to Nongwoo Bio's Yeosu Breeding Institute in Yeosu-si, Gyeonggi-do. Both groups reunited to wrap up the tour with a visit to a Korean Folk Village in Yongin-si, Gyeonggi-do.

Over the following pages we have included summaries from all the sessions, which should provide some greater insight into the current state of the industry, regionally and globally. Finally, we look forward to next year's edition in Manila (see page 35 for further details).



# General Assembly Meeting (GAM)



**The Songdo ConvensiA's spacious Premier Ballroom proved sufficient for this year's General Assembly Meeting (GAM), which had a particularly high turnout. And it proved a productive meeting following the confirmation of a two-thirds quorum.**

Prior to adopting the minutes from the 21st GAM in Goa, India, a member of the Indian delegation expressed reservations; however, an overwhelming majority vote finally adopted the minutes.

Outgoing President Zhiping Wang gave his review of the year and his two years as President, reviewing the various activities of APSA, before welcoming the three newest members to the Secretariat – Accountant, Executive Director and Communications Officer.

The floor was then handed over to the Treasurer, Mr. Jack Metzelaar, who gave a detailed presentation on the association's finances, which are in good health

despite unanticipated expenses last year. With budgeting out of the way, it was time to amend the constitution. There was no opposition to removing a clause dictating EC seats during the two-year transition period following the 2014 ratification of APSA's Constitution. Likewise, there were no issues adding a clause requiring at least one member of the EC be from Thailand, the location of APSA's headquarters, and effectively limiting EC membership from major countries (China, India, Pakistan, etc.) to two seats.

## APSA Against Child Labour

One of the main highlights of the GAM was APSA members unanimously voting to ratify a position paper opposing child labour in the seed industry.

Before the motion to vote was presented to delegates, Michel Devarreware, Vice President of East-West Seed Company and Chairman of APSA's Vegetables and Ornamentals Special Interest Group, provided some background on the paper.

Mr. Devarreware explained that APSA adheres to the definition given by the International Labour Organization (ILO) convention on child labour. This is defined as "work that children should not

be doing because they are too young to work or – if they are old enough to work – because it is dangerous or otherwise unsuitable for them". Industry consensus considers children as pupils under the age of 14.

"We realised this was a big concern for every company producing seed in the region ... so we formed a small working group, comprising of representatives from companies who had actually tackled the issue on the ground," he said.

The resulting paper not only reaffirms APSA's firm stance against child labour, but also includes guidelines on how to prevent child labour in seed operations.

Mr. Devarreware affirmed, "APSA does not tolerate child labour and wishes to support its members to actively engage in eliminating child labour from the seed industry."

"APSA believes that the implementation and enforcement of its no child labour policy can most effectively be realised through the actions of its members."

The position paper and guidelines – which were reviewed by the committee group, put through consultation by APSA members, endorsed by the Executive Committee, and were ratified by all members attending the General Assembly Meeting – are available on the APSA website.

## EC Changes

Three outgoing EC members were recognised for their service to APSA. They were: Ms. Anke van den Hurk (Plantum, Netherlands), who served on APSA's EC as an Associate Member and Programme Secretary; Mr. Noboru Nagai of Kaneko Seeds' International Trade Department, who served under the Seed Enterprise category; and Ms. Vanida Angsuphan of the Thai Seed Trade Association, who served under the National Seed Association category.

To fill the vacancies, in addition to one left after the retirement in 2015 of previous Immediate Past President, Avtar Singh Dhindsa, several members were called to the stage to be re-elected or elected during this year's GAM.

Mr. Jack Metzelaar was re-elected under the Seed Enterprise category while three members representing the Government Agency category were re-elected as follows: Dr. Tso Chi Yang, Director at the Taiwan Seed Improvement and Propagation

Station (TSIPS) in Chinese Taipei; Mr. Tsukasa Kawakami, Head of Plant Variety Protection Section, Department of DUS Test and Seed Inspection Center for Seeds and Seedlings, NARO, Japan; and Dr. Mihee Yang, who was the APSA EC liaison for this year's record-breaking Asian Seed Congress in Incheon and serves as the Examiner and Deputy Director at the Korea Seed & Variety Service (KSVS).

APSA delegates also voted to elect the following four new members:

Mr. Isao Iuchi, Manager of the Vegetable Sales Department and Overseas Sales and Marketing Division at Sakata Seed Corporation in Yokohama Japan, will serve as a representative of the Seed Enterprise category.

Also elected under the Seed Enterprise category, Muhammad Asim Butt, Head of Rachna Agri Business in Pakistan, is an executive member of the Seed Association of

Pakistan (SAP) and has served on the EC in the past.

Elected under the National Seed Association category, Mr. Wichai Laocharoenpornkul is an active member of the Thailand Seed Trade Association and is the General Manager of Seed Business at East-West Seeds Company Limited in Bangkok.

And finally, elected under the Associate Member category (from outside the Asian region), Ms. Michelle Klieger, who is Director of International Programs and Policy at the American Seed Trade Association. She represents ASTA on four executive boards: the Seed Association of the Americas, the U.S. Agriculture Export Development Council, the Coalition to Promote U.S. Agricultural Exports, and now, APSA.

For profiles of all 14 Members of the 2017 EC, please see page 30 and 31. 🌱



## And the Winners are...

In addition to all the good feasting and fun on the dance floor, the Inaugural Ceremony and Grand Banquet also served as an opportunity for various awards to be handed out. At the IC, APSA's Zhiping Wang presented awards to accomplished Korean seedsmen, Dr. Jin Young Yoon and Dr. Yong Pyo Lim, in recognition of their outstanding contributions to the seed industry. At the Grand Banquet,

APSA also presented a token to Korea's NOC (KOSA, KSVS) in gratitude for hosting this year's Congress.

The host country took the opportunity to recognise Dr. Chairerg Sagwansupyakorn of ThaSTA for his contributions to the seed industry, while presenting APSA with a \$30,000 donation for research projects and capacity building activities to further develop the seed industry in the region.

Keeping up with tradition, this year's best booth awards were as follows: 1st: Asia Seed Co Ltd, 2nd: Kwonong Seed and 3rd: Taiwan Seed Trade Association.

Finally, recognising this year's golf tournament achievements: Longest Drive: Sengottuevelu Senthilnathan; Nearest to Pin: Shahrulkh Malik; and Champion: Yongdong Chung. 🏆



## National Seed Associations Meeting



**This year's NSA meeting featured 11 presentations from seed associations representing Thailand, Japan, India, China, Chinese Taipei and the Philippines, as well as the Netherlands, France, USA and Chile. In addition to these, please also see the summaries on Korea (page 16) and Myanmar (page 25). The following are some highlights from the presentations.**

Vinich Chuanchai (Advisor, Thai Seed Trade Association) informed everyone that **ThaSTA** first started 15 years ago and was modelled after both APSA and JASTA. "The association is working closely with Thailand's DoA, APSA and BIOTECH to develop the country into a global seed production hub" he said, citing Thai farmers' laudable hand-eye coordination skills. ThaSTA has 54 seed companies, with a network spanning more than 200 retail points, and works closely with two other seed related associations in Thailand, including the Plant Breeding and Crop Multiplication Association of Thailand and the Seed Association of Thailand (the members of which are mostly government officials specialising in technical issues). Thailand aims to maintain and increase its seed export surplus, and hopes to become a UPOV member in the near future.

Dr. Dehua Ma, Ph.D. (China National Seed Association), explained that China used to have some 8,700 registered seed companies, but after the introduction of its new seed law at the turn of the century, the number was reduced by half. About a quarter of the remaining companies, or 1,036, are members of the **CNSA**, including 834 seed companies, 36 seed associations, 64 personal members, as well as 102 institutes and universities. He explained that the association, which was founded in 1980 and is based in Beijing, employs an enterprise credit rating of its members, taking into account various factors, be it capital, IP investment and research, sales, profit, production, and HR. The system ranks the companies in their respective sectors (vegetable, rice, cotton, corn, et al).

Ms. Zou Dan (Secretary, China National Seed Trade Association) provided more insight into China's seed industry. Founded in 1988, the **CNSTA** is a non-profit organisation under the MOA and has about 150 members who represent companies dealing in production, processing, machinery, and R&D. Its annual flagship event is the Beijing Seed Congress, which, held in October this year, attracted 800 registered

companies and saw 300 varieties demonstrated, generating some US\$73million in trade. Ms. Zou Dan went on to underline the merits of China's new seed law, which she said streamlines licensing processes while putting more responsibility on seed companies in terms of quality assurance. She went on to highlight seed market trends, revealing growth in both hybrid and OP rice, as well as in corn and potato seed, in contrast to declines in wheat, cotton, soybean and rape.

Dr. Tso-Chi Yang (President, Taiwan Seed Society) presented on behalf of both **TSS** and the Taiwan Seed Trade Association (**TSTA**). He revealed that TSS, established in 1990, has 299 members, comprising 288 individual members and 11 corporate members. He also introduced the association's website and quarterly journal "Seed and Nursery". He explained that the TSS does a lot of work to bridge relations and cooperation between Chinese Taipei and Mainland China in terms of PVP laws and procedures through its Cross-Strait PVP cooperation working team. Dr. Yang went on to present on TSTA, which was established in 1971 and has 183 members, comprising of 138 individual members and 45 corporate members.



The TSTA publishes a bimonthly journal, *Taiwan Seeds and Seedlings* and the *Taiwan Seed Industry Directory*, while also organising the Seed and Seedling Festival annually.

Mr. Toyoharu Fukuda (Sr. MD, Japan Seed Trade Association), explained that **JASTA**, which was established in 1973 and is based in Tokyo, has one president (Hiroshi Sakata), 53 directors, and its members include 1,074 seed companies and 40 companies classified as supporting members (agro inputs). Its membership is represented by seed producers, as well as wholesalers, with 439 retailers and 14,227 stores. He explained that JASTA actively cooperates with several other associations as part of the PVP Forum – including JATAFF, the Japan Fruit Seedling and Clonal Association, and the Edible Mushroom Spawn Association – and promotes competition through "best variety" contests, in which awards are presented at its GAM.

Mr. M. Prabhakar Rao (President, National Seed Association of India) revealed that the **NSAI**'s membership includes 383 companies representing India's public and private seed sectors, and that they plan to implement overseas membership in the near future. Among its members are 10 State Seed Associations. Mr. Rao outlined some of the challenges the Indian seed industry is facing in respect to IPR and trade issues, which are covered extensively in the media. He went on to underline the lucrativeness of the industry, revealing that seed exports from India in 2014-2015 were worth the equivalent of 5.9bn INR (about \$87mn), while the ISF valued the entire industry at \$2bn. The CAGR is expected to be 12% but Mr. Rao says annual growth may be closer to 15%. Dr. Mary Ann Sayoc (President,

Philippine Seed Industry Association) explained that the **PSIA** is one of the oldest NSAs in the region. Founded in 1976, it is relatively small with only 19 member companies, comprising of MNCs, local companies and three honorary members (government and academic agencies). Due to the Philippines' island geography, the PSIA is planning a number of field demos and "seed caravans" to promote awareness of high-quality seeds in remote islands. She said that only members of the PSIA are allowed to bid in government purchasing of seeds, and highlighted PSIA linkages with various Philippine government agencies, including the National Seed Industry Council, Plant Variety Protection Board, Philippine Council for Agriculture and Fisheries, and the Federation of Crop Science Society of the Philippines.

Mr. Mario Schindler (National Secretary, Chilean Seed Trade Association) revealed that **ANPROS** was founded in 1959 and has 65 members. Chile, which is a member of ISF, APSA and a founding member of SAA, was the 5th top seed exporter in the world, with exports in 2015 valued at \$314mn, while the domestic market was valued at \$169.6mn. Justifying Chile's export model, Mr. Schindler showed a map of the world, drawing a line at the equator and noting that 85% of the world's market was above the line, with the northern hemisphere also accounting for more than 90% of imports. Even though vegetables only made up 5.9% of its exports in weight in 2015, this segment represented more than 50% of the market value at \$146.5mn, in comparison to corn which represented 56% quantity (21k MT) with only 31% market share (\$91mn).

Mr. François Burgaud (Director of International Relations, GNIS) briefly outlined **GNIS**' extensive international cooperation and collaborations with

APSA, ISTA and UPOV, highlighting PBR and OCED activities it is partaking in within the region and beyond. This includes a PBR seminar it joined in Myanmar in December, which will lead up to a UPOV meeting at the end of February in Thailand, and the AFSTA Congress in Senegal, which will also be in February.

Ms. Anke van den Hurk (Deputy Director, Plantum) gave an overview of the Dutch association for the plant reproduction material sector, revealing that its 350 members are expected to reduce in future in light of corporate consolidation trends. **Plantum** members are active in both seeds and propagation, including tissue culture and plant material trade, and represent a vast global network that includes Dutch research stations and agents throughout the world, which Ms. van den Hurk said has a turnover of about 2.2bn Euros, and is divided into four departments: vegetable seeds, vegetable plants, ornamentals and agricultural field crops.

Ms. Michelle Klieger (Director of International Programs and Policy, ASTA) revealed that her association was founded in 1874, making it one of the oldest trade associations in the country, with more than 700 members today. A global "germplasm authority", ASTA is active in lobbying at the state, federal (national) and international levels, with a focus on trade policy and phytosanitary measures. **ASTA** organises four major conventions annually, including its Annual Convention held in June in a different city each year; the Corn & Sorghum Seed Research Conference (field crops) every December in Chicago; the Vegetable & Flower Seed Conference every January in either Florida or California; and the Farm and Lawn Seed Conference held in Kansas City every November. 🌱

# SIG & SC MEETINGS SUMMARIES

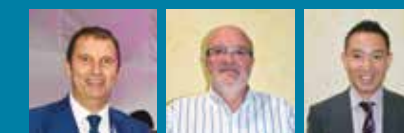
## Special Interest Group & Standing Committee Chairpersons 2017



**SIG-Hybrid Rice**  
Chair Frisco Malabanan  
Co-Chair Vaibhav Kashikar



**SIG-Field Crops**  
Chair Sateesh Kumar  
Co-Chair Tahir Saleemi



**SIG-Veg and Ornamentals**  
Chair Michel Devarrewaere  
Co-Chair Jack Metzelaar and Isao Iuchi



**SIG-Forage**  
Chair Bhupen Dubey  
Co-Chair Asim Butt



**SC-Seed Technology**  
Chair Johan Van Asbrouck  
Co-Chair Tso Chi Yang



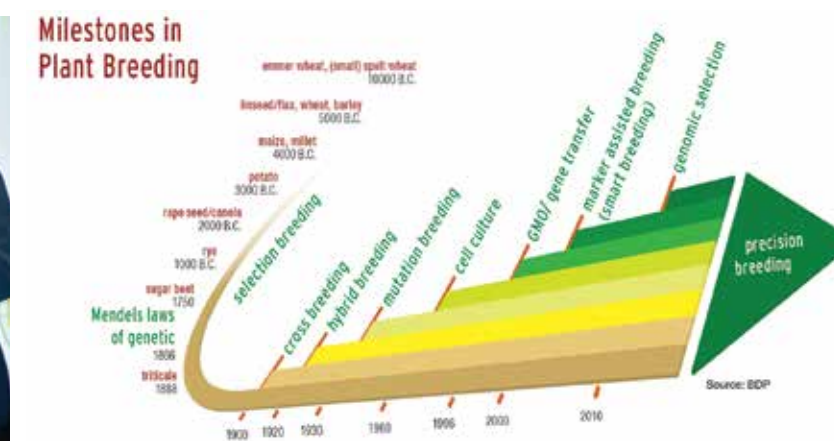
**SC-IPR**  
Chair Arvind Kapur  
Co-Chair Casper Van Kempen



**SC-Trade and Marketing**  
Chair Niranjana Kollipara  
Co-Chair Dehua Ma

## SPECIAL INTEREST GROUPS

### Vegetables & Ornamentals



This year's V&O SIG meeting, held on the afternoon of 8 November, was Chaired by Michel Devarrewaere of East-West Seeds, who opened the session with a report on group activities this past year. This included a recent study tour to the US, PRA Workshop; ongoing developments with ASRT discussions; the forming of a National Seed Association in Myanmar through the Myanmar VSAT; and the completion of APSA's position paper opposing child labour. Mr. Devarrewaere proposed a study tour in France next summer, before introducing Dr. U Thura Soe (Director of Horticulture, Government of Myanmar) who gave a presentation on opportunities and challenges facing the budding vegetable seed industry in Myanmar.

He underlined great potential for the development of and investment in Myanmar's vegetable seed sector. Interestingly, even though more than two thirds of the population are engaged in agriculture, this segment contributes a little over a fifth to the country's GDP. At the same time, the country is heavily dependent on the import of vegetable seeds. According to Dr. Soe, Myanmar imported nearly 1,700 MT of this commodity last year, compared to less than 40MT of exports. The bottom line is that the country is opening up quickly and Dr. U Thura points out that the Government welcomes foreign investiture with 100% FDI possible.

The second presentation covered the goals and activities of Fleuroselect, a Netherlands-based ornamentals variety membership association. Mr. Jean Francois Ignasse (Sales Manager, Europe, PanAmerican Seed, Netherlands) quickly raised eyebrows in

the audience when he revealed that traditional "Gentlemen's Handshake" type agreements were sufficient to protect the interest of Fleuroselect's members, and he garnered even more interest when expressing his aim to expand Fleuroselect's network beyond Europe and the Americas to Asia.

The Final presentation of the session was a biotechnology treat with Mr. Michael Keller and Mr. Szabolcs Ruthner of ISF presenting the latest in plant breeding innovation. Mr. Keller set the tone, reasoning that varieties developed through the latest breeding technologies "should not be differentially regulated if they are similar or indistinguishable from varieties that could have been produced through earlier breeding methods". Mr. Ruthner went on to give a simple introduction to CRISPR, Cas 9 gene editing technology, differentiating it as a tool for "Genome Editing", or the precise, controlled insertion of genetic material into a sequence, as opposed to more dated "Genetic Modification" methods, which are less controllable.







# CHIA TAI SEEDS CO.,LTD.



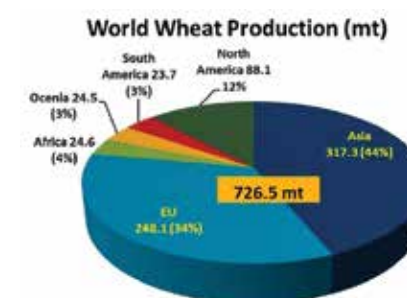
## Cover Crops (Forage & Amenity Seeds)



While less popular than field crops, hybrid rice, or vegetables & ornamentals, cover crops are certainly no less important. Nonetheless, APSA's Cover Crops SIG is in its budding phase, and the brief meeting on 9 November – chaired by SIG Chair and new APSA President, Brenda Dossey – served as an introductory and brainstorming session to better relay to members why cover crops are important in terms of ecology and economics. Planted in an “agroecosystem” primarily for the purpose of managing soil quality, erosion,

fertility, water, weeds, pests, diseases, biodiversity and wildlife, cover crops have been greatly underrated. Indeed, one of the challenges highlighted in the session was gauging interest through the right speakers and topics, which as newly appointed Forage Chair Bhupen Dubey pointed out, should underline the “bottom line”. In addition, Brenda proposed the possibility of organising a study tour to Australia, which would no doubt gauge more interest. Do keep your ears open for more news!

## Field Crops



The early evening session on 9 November, chaired by Dr. P. Sateesh Kumar, featured two lively presentations by two engaging and knowledgeable presenters. First, Dr. Arun K. Joshi (Country Representative India, CIMMYT) made a very strong case for the world's most traded grain in his presentation. Entitled “Opportunities & Challenges for wheat in Asia and the potential of hybrid wheat”, Dr. Joshi opened by highlighting the ongoing shortage, which, by some predictions, could reach 300 million tonnes by 2050. Compounding the supply shortage is production reductions in countries like Egypt and Saudi Arabia, the latter of which, as Dr. Joshi pointed out, plans to cease production altogether this year. Further compromising supply is the outbreak of Wheat Blast, a devastating fungus which originated in South



America and has now spread to South and Southeast Asia via Bangladesh. Dr. Joshi highlighted the importance of new disease and climate versatile varieties, and the comeback of hybrid wheat.

Next, Mr. Bhupen Dubey (CEO, Advanta Seeds) made a convincing case for another very important field crop, presenting on the “Opportunities & Challenges in pulses for the Asian seed industry”. And what better up-and-coming food source to discuss than pulses, since 2016, as Mr. Dubey highlighted, was declared the “International Year of Pulses”. Mr. Dubey pointed out how available agriculture land per capita continues to decline, from 0.44 hectares per 100,000 persons down to only 0.21 in 2003, with the figure expected to drop to 0.17 by 2025.



In contrast, due to an increasing population, the number of people per hectare of planted land is rising, once being only 2.3 per Ha in 1960, and is expected to be as high as 5.5/Ha by 2020. Enter pulses, such as dried peas, chick peas and lentils, which, unlike meat, contain high fiber content, higher than that of whole grains (wheat, rice and soya) and derivatives. Likewise, pulses are richer in protein than common grain, and it is for this reason that there is an increasing demand and pressure for them, as more and more people in countries like India – and indeed around the world – shift to high value proteins. As the demand has long outstripped supply, Mr. Dubey projects that Asian countries will continue to depend on imports from net exporting countries like Canada, Myanmar and Brazil, for some time to come.

## Hybrid Rice

The morning session of 10 November, chaired by Dr. Rakesh Chopra and Mr. Vaibhav Kashikar, featured two presentations. Presenting first was Mr. Vilas Vichayadachar (Rice Seed Quality Control Specialist, Rice Department, Thailand) who gave valuable insight on “Rice Seed Production in Thailand”. Mr. Vilas held nothing back in revealing that Thailand, regularly the world's top rice exporter, consistently has the lowest yields in the region, with figures showing, on average, less than three tonnes per Ha, less than half that of leader China. He cited various factors contributing to the low yields, including lower quality seeds, inadequate traditional planting practices (broadcasting vs. transplanting), as well as climate fluctuations and the fact that 70% of rice in the kingdom is grown in “rain-fed” ecosystems where fertility is low and production is hampered by salinity issues, on top of a shortage of



quality seeds. Mr. Vilas explained that unlike neighbouring countries, Thai farmers have always emphasised quality over quantity, so there has been less incentive to boost yields. Furthermore, he said that one main reason why hybrid rice has failed to take off in the kingdom is due to its prohibitive costs, which have failed to prove economical for farmers. Nonetheless, he presented a clear strategy

that the Thai government is employing in order to develop the country into a global seed production hub. Be sure to download the online presentation for full details. The second presentation was on the SIGs study tour at the end of October to India, given by APSA's Director of Technical Affairs, Dr. Narendra Dadlani. Full details on this trip can be found on pages 7-10 of this issue.

### Head:

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# STANDING COMMITTEES

## Seed Technology

The evening session was opened by chair Mr. Johan van Asbrouck, captivating the audience with a folk story about taming “wild lions”. The lion needing to be tamed that evening could perhaps have been interpreted as synthetic agri-inputs (chemical fertilisers or pesticides). So it was that an enlightening presentation on Biological Seed Treatments from Dr. Malavika Dadlani (Honorary Research Fellow, Bioversity International, India) gave an overview on the history, merits, research and applications of organic biological treatments, including biopesticides, biofertilisers and bioadjuvants. She pointed out that their application is nothing new,

and is a concept as old as farming itself. In respect to ecology and economics, the advantages of biologicals over synthetics are clear, with the global market size for biological seed treatment expected to grow to \$560.98 million by 2019, up from \$304.32 million in 2014. Next, the committee was given an update on the APSA – ISF Collaboration (SAT Com), and informed that a Viability App is ready for beta testing among members, who are advised to get in touch with Mr. van Asbrouck through APSA. The committee then broke into working groups to brainstorm ideas for future collaborations.



## Intellectual Property Rights & Biodiversity



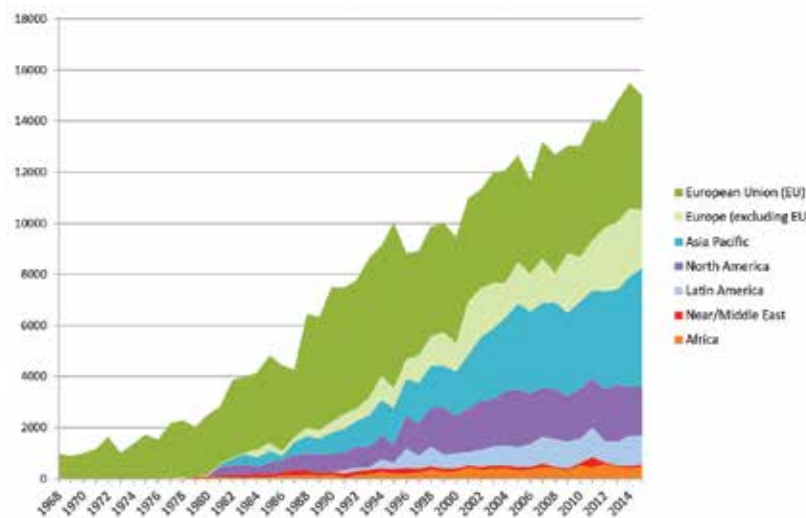
The afternoon session on 9 November, chaired by Dr. Arvind Kapur and Dr. Tsukasa Kawakami, featured several presentations. The first was made by the outspoken Ms. Anke van den Hurk (Deputy Director, Plantum, Netherlands) on “Access & Benefit Sharing (ABS) Legislation for a Plant Breeder”, which Ms. van den Hurk spelt out clearly and comprehensively. One of the first key steps in developing and maintaining a successful seed-trade business model is to understand relevant legislation, concepts and tools. Among them, there is the Convention on Biological Diversity (CBD), the Nagoya Protocol, the International Treaty on Plant Genetic Resources for Food and Agriculture (IT PGRFA), and the Standard Material Transfer Agreement (SMTA). She suggested that the IT PGRFA with SMTAs seems to be the best system, but recommended utilising ISF’s Information Tree for plant breeders to determine which system is most relevant, depending on the particular variety and place of business, urging plant breeders to implement ABS into their respective programmes while supporting improvements to it by sharing their own experiences in breeding circles.

The second presentation of the session was on “OAPI – as a model for implementation of IPR in plant varieties” given by Mr. Hamidou Kone (Head, PVP, OAPI, Cameroon). Mr. Kone gave an overview of IPR progress and procedures in Africa and brought his presentation home with some very sound advice, noting that anyone planning to do business in Africa would be very wise to protect their assets through PVP registration – not only in their respective countries of origin, but also in Africa through OAPI.

The third presentation of the session was an “Update on UPOV Activities” by Mr. Jun Koide (Technical / Regional Officer Asia, UPOV) who updated participants on the trends and activities of UPOV globally, especially in the Asia region. According to Mr. Koide, the number of UPOV members has nearly doubled since the turn of the century, and every year the number of titles granted for protected plant varieties continues to increase. Last year, a total of 12,409 titles were granted from 15,017 applications, bringing the total number of UPOV titles in force to more than 107,000.

Interestingly, the majority of applications last year came from Asian countries (4643), which was the first time for this region to surpass the European Union (4494) in the four-decade history of UPOV. As the system becomes more accepted and user-friendly, this trend is expected to continue.

Continuing on UPOV progress in the Asia-Pacific region was an “Update on EAPVP Activities” given by Mr. Tsukasa Kawakami on behalf of JATAFF, which serves as the current office of the forum, comprising of 10 Asean members, plus China, Japan and South Korea. Mr. Kawakami revealed that the forum has had nine annual meetings in different member countries since 2008, and is planning for its 10th to be held in the Myanmar capital of Nay Pyi Taw next year, when the forum will also host several PVP training and awareness activities in both Myanmar and Thailand. Mr. Kawakami also reported on a recent PVP awareness raising study tour to Japan back in July, which he said was effective in raising awareness about PVP amongst Japanese farmers and breeders alike.



## Trade & Marketing

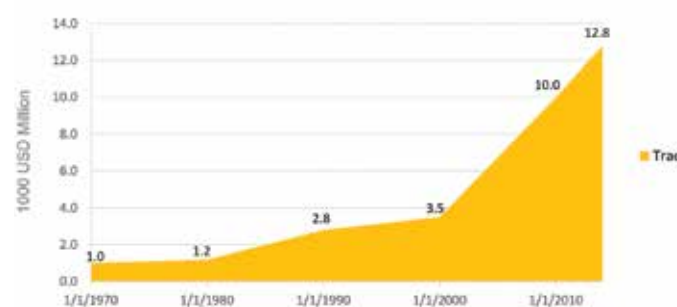
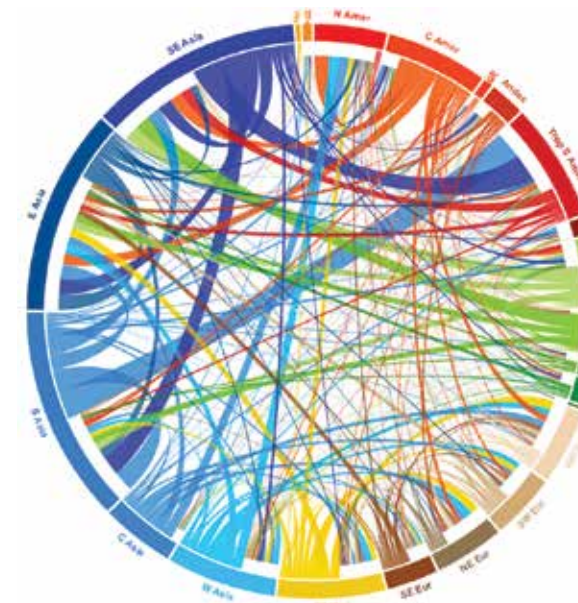


Last but not least, the final session of Congress, held on the morning of 10 November and chaired by Mr. Niranjana K. Kolipara, featured three presentations. Highlighting trends in the global seed trade was Mr. Michael Keller of ISF, in “Challenges & Opportunities for the Seed Industry in the Future”, pointing out the increasing importance and global interdependency of the trade. Rising with the demand for seed and food are technological abilities to produce seed and food, and market figures reflect this fact. Simply put, the value of international trade, as measured by imports and exports, has nearly quadrupled since the turn of the century, up to US\$ 12.8 billion. In Asia, he pointed out that the value of seed imports more than tripled in a decade from \$600 million in 2003 to \$2 billion in 2014, while the value of exports during the period more than quadrupled, from \$300 million to \$1.3 billion. Considering all the challenges and opportunities, Mr. Keller concluded that “Seed companies need to anticipate, to welcome change and to be adaptable”.

Next, Mr. Ido Verhagen (Executive Director, Access to Seed Index, Netherlands) presented on the 2016 Access to Seeds Index report, which ranks leading seed companies in regions identified as having food security challenges (see Asian Seed, volume 22, issue 2, pp. 6-7 & issue 5, pp. 28-30). Transparency was a reoccurring theme in Mr. Verhagen’s presentation, which proved what the surveyed companies have done, are doing and need to do. Mr. Ido outlined the two-year cycle in creating the indices, from consultations to drafting and submitting the methodology report, to collecting data and developing the actual index itself. Mr. Verhagen invited the audience to access the full report ([accessstoseeds.org](http://accessstoseeds.org)) before revealing that consultations are well underway for a Regional Asia Index, which is expected to be released in 2018.

Dr. Keshavulu Kunusoth (Executive Committee, ISTA), then reported on various ISTA criteria and figures in a presentation entitled “Facilitating Global Seed Trade”. Dr. Kunusoth opened by outlining the processes and considerations in producing and maintaining high quality seeds. He stressed that at all stages of seed production, whether in respect to breeding, development, treatment, testing, packaging, storing, or distribution, there should be an emphasis on ensuring that end users receive a product that is true to the genetic type of the variety, is free from diseases and weed seeds, and has high physiological quality (vigor) and uniformity. In doing so, quality checking at all stages is key, he said. Underlining the growth of the seed trade, Dr. Kunusoth provided figures to complement those of Mr. Keller’s, citing the overall value of the world seed market at \$53.76bn in 2014, and with an anticipated CAGR of 9.4% from 2015 to 2020, which is expected to be worth \$92bn by 2020. With its growing number of certified labs and committees across the globe, clearly ISTA is well positioned to meet the quality assurance needs of the market.

Finally, APSA’s Dr. N. K. Dadlani reported on APSA’s Phytosanitary Expert Consultation, covering various topics including phytosanitary harmonisation efforts in North America; Government and Industry Collaborations in Australia; ASEAN Phytosanitary harmonisation efforts; NPPOs update on PRAs; PRAs & Detection methods in regions; opportunities for collaboration; and ISPM for seeds. Dr. Dadlani reported that as a result of the committee’s activities and meetings, NPPOs have expressed appreciation for APSA’s efforts at Phytosanitary Regulations Harmonisation. They have also demonstrated an increased understanding of issues and have thus increased their willingness to engage with stakeholders, requesting for more regular APSA meetings, as seed PRAs have become priority.





# Meet the EC

## OFFICE BEARERS

### Ms. Brenda Dossey, President



Joining the EC in 2013, Brenda Dossey is an expert in turfgrass species with more than 35 years in the industry. She has undergraduate and graduate degrees in Agronomy and Plant Genetics, has been published in the Journal of Agronomy and Crop Science, and has worked extensively with the USDA before relocating in 2003 to Australia, where she naturalised under a regional skilled migration programme. She is the founder and owner of Gold Coast Agribusiness, an export company specialising in forage and turf seeds of tropical, subtropical and temperate species, with a special interest in cover crops.

### Mr. Tahir Saleemi, Vice President



Joining the EC in 2014, Tahir Saleemi is the CEO of Haji Sons, a renowned family-owned seed and extension services company based in Lahore, Pakistan, which supplies fertiliser, irrigation solutions and high quality vegetable and field crop seeds and seedlings to local farmers, greenhouses and for export. An MBA Graduate from Pakistan's Qaud-i-Azam University, Islamabad, and an Executive Committee member of the Seed Association of Pakistan (SAP), Mr. Saleemi has more than two decades experience in the international business of seeds, chemicals, irrigation systems and horticulture.

### Mr. Zhiping Wang, Immediate Past President



Joining the EC in 2012, Wang Zhiping is the Immediate Past President of APSA, having just completed his two-year tenure. Mr. Wang graduated from China's Southwest University with a Bachelor's degree in Agronomy and Plant Breeding in 1983, and has worked in the seed industry for 33 years, having worn hats for the China National Trade Association and the International Seed Federation, in addition to APSA. He is now the Managing Director and President of Celestial Seeds company, as well as Vice Chairman of Haidain Seed Chamber in Beijing.

### Mr. Jack Metzelaar, Treasurer



Joining the EC in 2013, Jack Metzelaar is the Vice President of Sales Asia at the business unit of HM Clause, based in Bangkok, Thailand. He has been based in Asia for ten years, six of which have been in Thailand. His past positions have included being VP of Sales and Marketing at Harris Moran Seed Company, USA; General Manager of Ball Holland BV; Sales and Marketing Director at Nickerson-Zwaan BV; and Commercial Export Director at Limagrain Group Subsidiaries.

## SEED ENTERPRISE

### Mr. Vaibhav Kashikar



Elected to the EC in 2015, Vaibhav Kashikar is the Executive Director of Ankur Seeds, a family-owned seeds company, based in the city of Nagpur in India's Maharashtra state. The firm is engaged in research and development, production, and processing a total of 17 crops, including field crops and vegetable seeds. Mr. Kashikar is a double post graduate, with a Master's of Commerce and an MBA in Rural Marketing, and has more than 15 years' experience in the industry. He is a core committee member of the Indian Seed Congress and an active member of the National Seed Association of India.

### Mr. Isao Iuchi



Elected to the EC this year, Isao Iuchi is a Japanese national and a graduate of Doshisha University in Kyoto. With more than twenty years of experience in the seed industry, Mr. Iuchi is currently the Manager of the Vegetable Sales Department and Overseas Sales and Marketing Division at Sakata Seed Corporation based in Yokohama Japan. His experience as a seed man spans over two decades, extending from Japan, Asia and Oceania regions to NAFTA and EMEA. He passed the examination of USCPA (Certified Public Accountant of the United States) in 2009.

### Mr. Muhammad Asim Butt



Elected to the EC this year, Muhammad Asim Butt is a Pakistani National with more than 25 years' experience in the seed and agriculture sector with his organisation specifically focusing on hybrid vegetable seeds. Mr. Asim Butt served as a Member of the Executive Committee for APSA from 2010-2013 and was 2nd Vice President of the association from 2012-2013. Mr. Asim Butt is also an Executive Member of the Seed Association of Pakistan while holding the Chair position of their Vegetable Seeds Committee.

## GOVERNMENT SEED AGENCIES

### Dr. Tso-Chi Yang



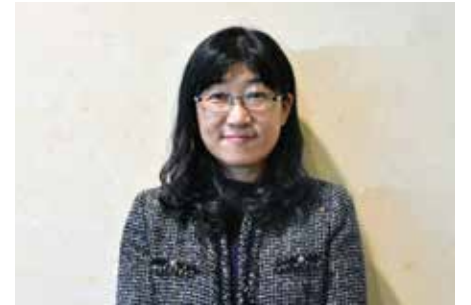
Re-elected to the EC in 2016, Dr. Tso Chi Yang holds a Ph.D. in Plant Pathology from the University of Florida while having obtained his bachelor's and master's degrees from the department of Plant Pathology at the National Chung-Hsing University. Dr. Yang is currently a Director at the Taiwan Seed Improvement and Propagation Station (TSIPS), is a COA Designated member of ISTA, is the President of the Taiwan Seed Society, and is an Executive Committee Member of the Agricultural Association of Taiwan in Chinese Taipei.

### Mr. Tsukasa Kawakami



Re-elected to the EC in 2016, Mr. Tsukasa Kawakami is currently the Head of PVP Section, Department of DUS Test and Seed Inspection Center for Seeds and Seedlings, National Agriculture and Food Research Organization (NARO). A graduate of Sanno Junior College in Tokyo, Mr. Kawakami is engaging in work that supports enforcement of PBR in NCSS. Mr. Kawakami also held the position of Associate Director in the Seeds and Seedlings Division at the Plant Production Bureau, Ministry of Agriculture, Forestry and Fisheries (MAFF), and he took charge of the operation of the EAPVP Forum for developing PVP system in East Asian region.

### Dr. Mi-Hee Yang



Re-elected to the EC in 2016, Dr. Mi-hee Yang was the APSA EC liaison for this year's record-breaking Asian Seed Congress in Incheon, South Korea. She is a South Korean national who currently serves as the Examiner and Deputy Director at the Korea Seed & Variety Service (KSVS). Dr. Yang has been in charge of planning and coordination of the PVP system and Seed Certification system, as well as having provided various supporting projects for the Korea Seed Industry. Dr. Yang holds her MS degree in Environmental Horticulture from the University of Seoul and also completed her Ph.D. coursework at the same university.

## SEED ASSOCIATIONS

### Dr. Dehua Ma



Re-elected to the EC in 2015, Dr. Dehua Ma has been the Vice President of Yuanlongping Hitech in China since last year, and from 2003 to 2015 was the GM of Tianjin Derit Seeds Co., Ltd. Holding a Ph. D. in Crop Breeding from the Beijing Agricultural University, on top of a master's degree in Vegetable Science from Northwestern Agricultural University, Dr. Dehua has 25 years professional experience in vegetable research and vegetable seed extension, and is an active member of the China Seed Association. He is also the current President of the Seed and Seedling Section of the China vegetable Association.

### Mr. Wichai Laocharoenpornkul



Elected to the EC in 2016, Mr. Wichai Laocharoenpornkul is the General Manager of Seed Business at East-West Seeds Company Limited, as well as being a representative of the Thailand Seed Trade Association. Mr. Laocharoenpornkul holds a master's degree from the University of Central Queensland and is a graduate of Mahidol University. When not hard at work, Mr. Laocharoenpornkul dedicates his time to his wife and two children. Prior to working in the seed industry, he gained extensive experience in the pharmaceutical industry.

## ASSOCIATE MEMBERS

### Mr. Casper van Kempen



Elected to the EC in 2015, Casper van Kempen is from the Netherlands. He has a master's degree in Economics from Rotterdam University (NL), as well as in Agricultural Economics from Reading University (UK) and in Business Administration from IMD in Lausanne (Switzerland). Having spent 17 years in international assignments abroad, Casper has held several international senior sales and marketing management positions in flower and vegetable seed companies. He took up his present position at the Anti-Infringement Bureau for IP Rights on Plant Material, Brussels, in 2010.

### Ms. Michelle Klieger



Elected to the EC in 2016, Michelle Klieger is the Director of International Programs and Policy at the American Seed Trade Association. An American national who holds a Bachelor of Science degree from the University of Maryland, in addition to a Master of Science degree from Purdue University and a Master of Business Administration from Indiana University. Ms. Klieger represents ASTA on three Executive Boards: the Seed Association of the Americas, the U.S. Agriculture Export Development Council, and the Coalition to Promote U.S. Agricultural Exports.



# International Meetings 2017

DATE	MEETING	VENUE
28 Jan – 2 Feb	ASTA 56th Vegetable & Flower Seed Conference	Orlando, Florida, USA
12 – 14 Feb	NSAI Indian Seed Congress	Kolkata, West Bengal, India
28 Feb – 2 Mar	AFSTA Congress 2017	Dakar, Senegal
5 – 10 Mar	ISF Committee Meetings	Zurich, Switzerland
3 – 7 April	UPOV meetings	Geneva, Switzerland
22 – 24 May	ISF World Seed Congress	Budapest, Hungary
19 – 22 June	ISTA Annual Meeting 2017	Denver, CO, USA
21 – 24 June	ASTA Annual Convention	Minneapolis, MN, USA
Sept (TBC)	Beijing Seed Congress	Beijing, China
8 – 10 Oct	ESA Annual Meeting	Riga, Latvia
15 – 20 Oct	ISF Midterm	Montreal, Canada
23 – 26 Oct	UPOV meetings	Geneva, Switzerland
5 – 6 Nov	ASTA Farm & Lawn Seed Conference	Kansas City, MO, USA
14 – 17 Nov	Asian Seed Congress	Manila, Philippines
Dec (TBC)	Guangdong Seed Expo	Guangzhou, China
4 – 8 Dec	ASTA Corn, Sorghum and Soy Seed Expo	Chicago, Illinois, USA

## New APSA Members

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# Linking the Right Components, Growing Together

By Chairerg Sagwansupyakorn, Former APSA  
President and current President of ThaSTA



**Born in 1950 in Prakanong, in the then-outskirts of Bangkok, I have always had a keen interest in seeds, plants and agriculture. As a youth I spent a lot of time around my family's rice mill. After graduating high school, I enrolled at Thailand's main agriculture research institution, Kasetsart University, where I studied Soil Science for my undergraduate years, followed by a master's degree in Horticulture.**

I got hired as a researcher with the Horticulture Department, and from early on I learned the value of teamwork. On my research team were two guys who I still consult with to this day, Kasem Piluek and Sutevee Sukprakarn. Having worked together for several years, the three of us went on to further our studies abroad. Kasem, a specialist in plant breeding, went to the Philippines. Sutevee, whose focus was in seed technology, went to New Zealand. And I went to Japan, having been awarded the

Mobushu Scholarship to pursue my Ph.D. at Tsukuba University, where I studied flowering physiology.

It was there in Japan that I really gained a strong understanding of seeds. The Japanese style of learning proved very beneficial to me, such as the way they analyse data very deeply, which turns out to be essential for isolating problems and solving them. I am particularly thankful to my professors, Okagi, Suzuki and Shinohara, for my success there. After returning to Thailand in 1987, a Thai professor, Ms. Somporn, encouraged me to focus on seeds.

Around that time, vegetable seed production was shifting from Taiwan to Thailand, and there was a lot of R&D potential. Reunited with my teammates, Dr. Kasem and Dr. Sutevee, and with our combined strengths and knowledge, we made a lot of ground in our department, producing a number of

new varieties of tomatoes, beans, peas and other vegetables.

In 1997, around the time the economic crisis hit, I was eager for a new challenge, so I resigned from my government job and joined a private firm, Thai Seed and Agriculture, or TSA, initially as Vice Director then later as Managing Director, a position I held for about a decade.

As someone with strong linkages in both the private and public sectors, I have always enjoyed addressing challenges and solving them. I am proud to have been part of both ThaSTA and APSA from their early stages, and am grateful to have served as President for both (2009-2010 for APSA and ThaSTA 2016-2017).

The seed industry is constantly growing and changing, so we all need to be ready to adapt and change with it too. Government doesn't always understand the challenges facing traders, but progress is constantly being made. At the same time the private sector needs the government, in terms of research resources, policy and regulations. No one can stand alone, but we must combine our strengths and move forward, together.

In Asia, there's a certain culture where sometimes we just need to sit down at a table and talk it out, openly bringing out our issues. Regulations and rules have their purpose in the seed industry, but they aren't always the most effective way to solve some issues. There's nothing like a good old heart-to-heart, and this is what I hope to see more of in our associations.

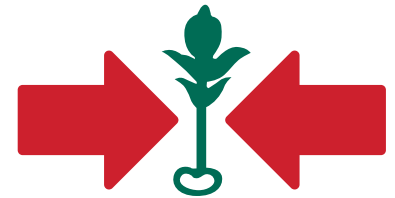
For now, I've come out of retirement and have returned to TSA full time as Managing Director. In addition to wearing hats for ThaSTA and APSA, I find myself busy as ever; being on the road a lot, visiting research stations, meeting with officials, advising and linking components and seedsman so as to mitigate and solve problems. It's what I love to do and I don't see myself slowing down any time soon. Finally, I would like to extend thanks to everyone for their support and dedication, which can and will only lead to good things. 🌱

## 24th Asian Seed Congress

Manila, Philippines  
14-17 November 2017

**APSA**  
THE ASIA & PACIFIC  
SEED ASSOCIATION





EAST-WEST SEED

# Growing Opportunities

Seed represents potential, possibility, opportunity.

Through quality seeds and knowledge,  
**EAST-WEST SEED** provides farmers with  
opportunities for a better livelihood.

2017, East-West Seed marks its 35th year  
of fulfilling its mission.

re celebrating **Growing Opportunities**  
to serve more and more farmers  
in the tropical world.



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