Allied we stand

APAC seed sector unites to solve burning seed sector challenges, ensure sustained access to germplasm & sustainable biodiversity
ASIAN SOLANACEOUS & CUCURBITS ROUNDTABLE

ASCRT 2024

Bangkok, Thailand

24-26 Sep 2024

Venue: Chia Tai Auditorium, Sukhumvit 60 and half day site visit at NSTDA

HARNESSING NEW BREEDING TECHNOLOGIES FOR CLIMATE CHANGE-RESILIENT VEGETABLES

This 3-day event will feature keys topics, such as:

- Modern breeding techniques & resistance to diseases and pests in Solanaceous and Cucurbitaceae crops
- Germplasm diversity and plant variety protection
- Plant breeding innovation: genomics & genome editing
- Application of AI and digital technology for high throughput phenotyping insect resistance in Solanaceous and Cucurbitaceae crops
- Technology platform demonstration, training needs and public-private partnership
- Site visit at the National Science and Technology Development Agency (NSTDA)

Registration fee

APSA member companies: 200 USD per person
APSA non-member companies: 250 USD per person
Students: 50 USD per person

10% discount when registering more than 5 people
10% discount for 2023 APSA Solanaciars TGIF participants
*Companies can choose only one discount scheme.

More information and registration please scan QR Code, visit www.apsaseed.org or contact kuna@apsaseed.org
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19 Midterm association health check-up

APSA held its second annual in-person Seed Association meeting, bringing together stakeholders from throughout the region to discuss the past, present and future of the industry, and the role of APSA.

35 30-years young and strong

Featuring insightful well-wishings from past and present committee members in the latest round of tributes to our beloved association on this special 30-year anniversary occasion.

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Greetings members, partners, friends, and newcomers alike. It is my intent for this quarterly address to reach not only our regular readers within the APSA family but also the broader public across our increasingly connected world. In this digital age, where communication is almost instantaneous and free from the physical and technological limitations of the past, it makes sense to cast a wider net and maximize the impact of our message and mission.

Indeed, APSA’s digital footprint continues to expand. Previously, the Executive Committee (EC) met only three times a year—in person once in June and twice during our annual Congress. Now, we also meet online quarterly, enhancing our internal communications and making our governance more efficient and transparent. This allows APSA to act as one voice, one team. I have many positive outcomes to share from our recent in-person meeting in Sanya, China, in mid-June, which I’ll discuss shortly. First, let me recap some important activities and highlights from the past quarter.

In April, we held the annual midterm meeting of the Working Group of Integrated Vegetable Seed Companies (WIC), alongside our annual Seed Association Meeting and a new Regional Consultation on IP and Biodiversity. You can find more details about these meetings in this issue (see pp 16-23). A significant outcome was the approval of a new Special Interest Group on Plant Breeding Innovation (SIG and PBI). This group is currently recruiting members to identify priority areas of focus, ensuring that APSA continues to safeguard and accelerate plant breeding innovation, a cornerstone of our mission to provide quality seeds for the world (see Technical Affairs updates on page 28).

Another exciting development in April was the signing of our 11th Memorandum of Understanding (MoU) under our University Connect program. This agreement formalizes APSA’s partnership with National Chung Hsing University and the Taiwan Seeds Trade Association, bridging the gap between academia and industry. The Secretariat, through our University Connect task force, will reach out to all our seed association and University Connect partners in the coming weeks about the next steps. Stay tuned.

May was another eventful month for APSA. We held our 8th annual WorldVeg Breeding Consortium Workshop, which remains a model for effective public-private partnerships in meeting the breeding R&D needs of our members (see page 12). I also had the pleasure of representing APSA with Director Francine Sayoc and Technical Advisor Dr. Shivendra Bajaj in Rotterdam for the World Seed Congress. ISF celebrated its centenary milestone, and I was honored to participate in these celebrations. APSA is celebrating its 30th anniversary this year, and I believe the seeds we plant today will be remembered with awe when we turn 100 in 2094.

In June, our first in-person EC meeting of the year was held in Sanya, the venue for this year’s upcoming Asian Seed Congress. We reviewed APSA’s strategic direction, organizational structure, plans, and ongoing activities, ensuring we can strengthen and adjust our association accordingly. We also inspected the Congress venue and met with government officials from Sanya city and Hainan province, who assured us of their full support for this year’s important partnerships for APSA. The first was an MoU with ISF, and the second was a multilateral agreement with ISF and 11 other regional organizations to combat illegal seed practices. (More details on page 7.)

Rotterdam was especially significant for the APAC region. Two of our colleagues were awarded ISF Honorary Life Membership: Dr. Mary Ann Sayoc, APSA past president and current president of the Philippine Seed Industry Association, and Hiroshi Sakata, President of Sakata Seed Corporation. Additionally, Arthur Santosh Attavar began his term as ISF’s first Asian president. Congratulations to all three for their dedication to our common mission. I am proud to see increased recognition and representation of Asians in the seed sector. While ISF celebrated its 100th birthday on May 29, I was also celebrating my own 50th birthday. The emcee at the ISF Gala dinner surprised me with a heartwarming birthday song from all attendees. Thank you.

In June, our first in-person EC meeting of the year was held in Sanya, the venue for this year’s upcoming Asian Seed Congress. We reviewed APSA’s strategic direction, organizational structure, plans, and ongoing activities, ensuring we can strengthen and adjust our association accordingly. We also inspected the Congress venue and met with government officials from Sanya city and Hainan province, who assured us of their full support for this year’s
We are pulling out all the stops to ensure a memorable 30th anniversary celebration. We will be banging the drum louder as the day nears, meanwhile, be sure to follow us on our digital and social media channels for updates (visit 30years.apsaseed.org if you haven’t already).

I also met with representatives from Turkish seed associations TURKTED & TURKTOB about their proposal for Turkey to host the Asian Seed Congress in 2026 (India is confirmed as the host next year). Over Turkish coffee and an impressive art demonstration, they made a strong case. We also have at least two other contenders vying to be APAC’s ‘seed capital’ in two years’ time. The decision is not official yet, but the EC will make a decision, which will be announced at our upcoming AGM in Sanya.

Speaking of which, we are well on track to book out most of our available exhibition and meeting space for APSA’s main event (#AsianSeedCongress2024) this December 2-6, which looks to be a sold-out event with record turnout. Up-to-date availability and statistics are shared in our monthly news bulletin sent to all members and partners around the 15th of each month. I urge you to confirm your participation in this year’s Congress soon, as Early Bird Registration ended on June 30 and space is filling up fast.

More details at apsaseed.org/asc2024.

With that, I’ll conclude this quarterly address. I look forward to bringing you more updates from the president’s office in three months. #SeedyouSoon
Ready to step into future, standing on a strong foundation

My warmest greetings to APSA members and partners. As of writing, I’ve just returned from the Executive Committee meeting in Sanya, where we will reconvene in December for the Asian Seed Congress 2024.

The hot daytime temperature in the city was matched by the incredibly warm reception from our hosts. But don’t fret – the weather is expected to be at its best in December as the cooler months bring the entire APAC seed community to this tropical destination. We are very much looking forward to that!

Registrations to the Asian Seed Congress are in full swing. We are impressed with the speed and enthusiasm with which our delegates have been booking their spot for this congress. The trading tables, exhibition booths, and meeting spaces are getting filled up fast, so don’t wait too long.

This year is special for APSA as we celebrate our 30th anniversary. An association reaching its third decade doesn’t happen by chance; it is the outcome of countless individuals’ work and dedication. APSA’s journey began in 1994 with a mission to support sustainable agriculture through the production and trade of quality seeds for the world. Today, we must ask ourselves how well on track we are to achieve this objective, while taking stock of the numerous and significant shifts in our operating environment.

Advancements in breeding technologies and farming practices, steadily growing populations, rapid urbanization, and a modernizing food value chain are all opportunities for seed companies, innovators, and service providers. At the same time, the challenges facing our industry are rising, from climate change and regulatory complexities to unpredictable market dynamics.

Our job to advocate for the seed industry and ensure its robust future has never been more crucial. How should APSA rise to the occasion?

While honoring our past achievements, we must boldly step into the future too. This year, together with the Executive Committee, we initiated a strategic review of APSA on its 30th anniversary. A big part of this exercise is defining our value proposition to you, our members. In the next few months, we are inquiring into your perceptions and needs so that we may know how to support you better and where we should put our focus and resources. This will help us continue evolving as an association that is prepared to meet the diverse and changing needs of time.

I look forward to hearing from you on how we, together, can build an even stronger and more dynamic APSA.

In April APSA signed the 11th Memorandum of Understanding (MoU) under our University Connect program. This partnership was forged with National Chung Hsing University and the Taiwan Seeds Trade Association, and will serve as the foundation for bridging gaps between academia and industry. The APSA Secretariat, through our University Connect task force, will be reaching out to all our seed association and University Connect partners in the coming weeks about the next steps. Stand by.
Fostering stronger technical and advocacy cooperation globally

The Asia and Pacific Seed Alliance (APSA) and the International Seed Federation (ISF) signed a Memorandum of Understanding (MoU) during the centennial ISF World Seed held in Rotterdam.

The MoU, which was signed by APSA President Dr. Manish Patel and ISF Secretary-General Michael Keller, in the presence of ISF President Arthur Santosh Attavar, Immediate Past President Marco van Leeuwen and APSA Executive Director Francine Sayoc, underscores a significant step towards enhanced collaboration between the two organizations.

The newly signed MoU will serve as a foundation for cooperation on technical and advocacy matters, focusing on critical areas such as seed movement, plant breeding innovation, and intellectual property (IP). This partnership aligns with APSA’s and ISF’s policy priorities in the Asia-Pacific region, aiming to harmonize seed-related policies to facilitate both regional and international seed trade and innovation.

“The collaboration between APSA and ISF is pivotal for promoting agricultural policies and capacity building to global standards within the Asia-Pacific region,” said Dr. Manish Patel. “This MoU is a testament to our commitment to fostering mutual technical cooperation and knowledge exchange, which will ultimately benefit the seed industry at large.”

Michael Keller highlighted the importance of this partnership, stating, “By building more strategic cooperation, ISF and APSA are positioned to drive significant advancements in seed policy and technical cooperation, ultimately fostering innovation and growth in the global seed industry.”

Key Objectives and Activities of the MoU Include:

1. Exchange of Technical Information: Both parties will share technical information in compliance with respective laws and regulations to strengthen their knowledge base and achieve strategic objectives.

2. Organizing Cooperative Activities: APSA and ISF will jointly organize conferences, workshops, seminars, webinars, and training programs on agreed-upon subjects, especially between public and private sectors.

3. Bridging to NSAs: Increase the support and engagement with National Seed Associations, building on the complementarity of ISF and APSA.

4. Resource Development and Expert Exchange: ISF will support APSA by providing expert speakers, literature, and database resources for APSA-organized events. In return, APSA will facilitate technical and legal information exchange regarding seed movement in specific countries.

Francine Sayoc emphasized the value of increased alignment between the regional and the international associations, saying, “APSA is poised to play a crucial role in engaging national seed associations, bringing them up to speed on global seed policy developments and aligning our advocacies at international, regional and national level through this partnership.”

See also related news about APSA signing an MoU with global partners to combat illegal seed practices. On your web browser, type: tinyurl.com/illegalseeds2024
Advocating for Seeds Within Europe

Petra Jorasch, manager at Euroseeds, advocates for plant breeding innovations, collaborating with stakeholders to boost agricultural productivity through regulatory support and better understanding.

SW: What are the key factors contributing to the perception that the European regulatory environment is complex?

Jorasch: When it comes to GMOs and the regulation of GMOs, it’s just a very burdensome and very expansive regulatory framework. For conventional seeds, it’s not very complex, and it’s also harmonized on an EU level, meaning Member States need to comply to the same rules and regulations. But when it comes to GMOs, and specifically NGTs, which are currently considered GMOs in Europe, until we have a new regulation in place, that’s very complex and very challenging.

SW: Tell us about the current flux in the regulatory landscape.

Jorasch: In 2018, the European Court of Justice decided that all new genomic techniques (NGTs) or new breeding techniques, as they were called at the time, would be considered to lead to genetically modified organisms and be regulated as such. The European Council asked the EU Commission to assess if the current regulatory situation is fit for purpose. After the study, the Commission came up with a proposal to regulate what they call new genomic techniques in a different manner than classical GMOs.

SW: Can you explain Category 1 and outline how companies might ensure they remain in a Category 1?

Jorasch: This Category 1, as it is called, defines what type of genetic changes introduced by NGTs can be considered conventional-like and regulated different from GMOs. I would advise companies to look at the Commission proposal; that draws some lines and presents certain technical criteria. Staying within that concept would be the most promising way of doing it... Category 1 will allow 20 genetic modifications of certain types, which means single mutations or deletions of parts of the DNA. They also allow the introduction of so-called cis genes.

SW: For companies that are currently trading, what are the current guidelines for NGTs?

Jorasch: Currently NGT plants and resulting products are GMOs and you need to have a full approval as a genetically modified organism or product. For the more than 20 years, no company has ever obtained cultivation approval in Europe. The only cultivation approval we currently have is Bt corn grown in Spain and Portugal... What I expect and what we already see is that some companies and also research institutions aim for field trials. They are still under the GMO requirements, but there are already some field trials with NGT potatoes in Sweden, as well as maize field trials in Belgium.

SW: So, the proposed changes would actually open this up a little bit more and create more opportunity?

Jorasch: There’s some hope with Member States to acknowledge that these products are different. They are still falling under the current regulatory GMO requirements, but they see the difference and they want to make it happen.
American Seed Companies See Opportunity

Kevin Diehl is the director of global genome editing regulatory policy for Corteva Agriscience. He grew up in agriculture on the family farm in central Iowa and earned a bachelor's degree in agronomy and agricultural studies from Iowa State University and a Ph.D. in plant physiology and weed science from the University of Illinois. He has worked for DuPont, DuPont Pioneer and now Corteva Agriscience.

SW: Regarding the complex European regulatory situation, could you describe some of the major regulatory hurdles that seed companies face when introducing genetically edited seeds into the European market?

Diehl: Genome editing allows breeders to use a plant’s own DNA to make changes efficiently, much like traditional breeding but without introducing DNA from other species, unlike GMOs. However, the lack of regulatory clarity in countries we trade with, like the EU, creates challenges due to the global nature of our business. The EU is considering regulating these technologies more pragmatically, which could provide certainty around timelines and the necessary regulatory science, ultimately driving innovation and creating more sustainable products.

SW: How do the EU’s regulatory standards for genome-edited crops compare with those of other markets, like Brazil?

Diehl: The current EU proposal isn’t finalized yet, so it’s hard to say exactly what it will look like. However, it is moving in a positive direction. Countries like Brazil and others in Latin America, as well as Canada and the U.S., have regulatory systems that distinguish between GMOs and products of genome editing, treating the latter more like an extension of traditional breeding. These countries are more innovation-friendly, which allows for more efficient and effective delivery of new products.

SW: What are some common misconceptions or challenges you face when explaining the science of genome editing to European regulators?

Diehl: One challenge is the misconception that innovation in agriculture isn’t necessary — that it can remain static. However, innovation is crucial for addressing food security and adapting to changing climates. It’s important to communicate that technology can drive sustainability and enhance productivity, not just for large companies like Corteva but across the industry.

SW: What opportunities does the European market present for genome editing technologies in agriculture?

Diehl: There’s tremendous opportunity in Europe for enhancing productivity and addressing issues like disease resistance, which is increasingly important as climates and production practices change. Genome editing can speed up the breeding process, allowing for quicker adaptation of crops to conditions like drought, making them more resilient.

SW: How do you engage with stakeholders like farmers and even consumers to foster understanding and acceptance of genome-edited crops?

Diehl: We’re always in close contact with farmers, our primary customers, to understand their needs and improve our tools accordingly. We also engage with downstream stakeholders like food processors, retailers, and consumer groups. This dialogue helps us address their needs and discuss how gene editing can provide solutions, such as improving the shelf life of fresh produce. Working with entities like the Center for Food Integrity, we’ve helped develop responsible use guidelines to help people understand and be comfortable with this technology in their food supply.

“There’s tremendous opportunity in Europe for enhancing productivity and addressing issues like disease resistance, which is increasingly important as climates and production practices change.”

– Kevin Diehl

SW: Could you talk about any collaborations or partnerships that Corteva is involved within Europe to advance the acceptance of genome-edited agricultural products?

Diehl: Corteva has an open innovation platform that fosters creativity and sparks global innovation. We offer CRISPR-Cas technology licenses to various entities, including many in the EU, working on vegetables and row crops. This broad collaboration ensures that when regulatory policies permit, these entities will be ready to commercialize their innovations.

SW: What’s your outlook regarding gene editing’s future?

Diehl: It’s exciting to discuss the technology and innovations at Corteva, but it’s also vital to have the right regulatory framework and consumer acceptance to see these innovations adopted. Gene editing has vast potential to address food security and improve food quality, and I’m optimistic about what we can achieve with these tools.
Risk is Inevitable and Communication is Vital

David Zaruk is an expert on risk. As a regulatory policy analyst, he has been an EU risk and science communications specialist since 2000 and is particularly knowledgeable about the seed industry’s interaction with Europe’s complex regulatory framework. He’s also a regular columnist for Seed World Europe.

SW: What are the most significant challenges seed companies face when trading with Europe?
Zaruk: One of the things that we tend not to understand and that gets lost in a lot of the debates is that this is a trade issue more than a scientific or ideological issue. If you block a seed or products from those seeds from being exported into the European Union, then you can give certain advantages to your own farmers or your own seed companies.

SW: How do Europe’s stringent regulations impact our innovation and competitiveness?
Zaruk: Europe has exported quite a few researchers to North America and when the European Court of Justice had their decision, which said that the new plant breeding technologies would have to be regulated under the 2001 GMO Directive, they essentially knocked the wind out of the sails of many of the innovative seed researchers within Europe. I think Europe is at a competitive disadvantage on a lot of these issues.

“...it’s based on trust. It’s based on very clear information, well communicated by trusted public figures.”
- David Zaruk

SW: Your area of expertise is in risk. Do you think that we have effective communication of risk within the seed industry? How could we improve it?
Zaruk: We can always improve communication on risk. It’s based on trust. It’s based on very clear information, well communicated by trusted public figures. I think one of the real problems is the relationship of the food chain itself. The seed breeders are at the very beginning of the process, and they work with agronomists who are working with farmers to develop the seeds to answer the problems that they have. Now the farmers, meanwhile, are working with their buyers and perhaps also food processors and food manufacturers, who themselves are working with the brands and the retailers. But this chain cannot be integrated without good risk communication.

SW: How are sustainability concerns being integrated into Europe’s regulatory framework for seeds?
Zaruk: One of the difficulties that we have is defining sustainability. Many people would say sustainability means it has to be in harmony with nature. If you’re using something synthetic, or you’re putting a pesticide onto a seed, you’re not being sustainable. The whole idea of an integrated pest management system is interpreted in different ways because the goal of it is to use as little pesticides as possible. Defining sustainability on the farm is almost impossible. Better communication along the food chain will yield to more sustainable farming approach.

SW: What future regulatory policy trends could affect seed trade with Europe?
Zaruk: We will reach 10 billion people [in population] at some point. I don’t think European farming will be the main center of where this growth in agriculture will take off. We saw already after the crisis in Ukraine how farming tried to expand its yields and capacity quickly to cover this loss, particularly because Ukraine exported a large amount of food to the World Food Program in developing countries. It’s important to realize that the future of farming is going to be in countries in Africa, where they have a large amount of underutilized farmland as well as the largest growing population. And there we’re beginning to see, particularly with the seed technologies, that many of these gene editing processes can solve problems in the field. SW

This article has been shortened for print. To read the full version, go to www.seedworld.com/US
U.S. DEPARTMENT OF Agriculture (USDA)
Undersecretary Jenny Moffitt joined an international panel discussion about regulatory approaches to genome-edited plants at the 2024 American Seed Trade Association’s (ASTA) Vegetable and Flower Conference. Undersecretary Moffitt oversees marketing and regulatory programs at USDA.

Undersecretary Moffitt highlighted the collaboration between USDA, the Food and Drug Administration (FDA), and the Environmental Protection Agency (EPA) in her address. “This framework that we have—the scientific-based regulatory framework—has allowed the United States to be a global leader when it comes to biotechnology,” Moffitt said. “Genetic engineering comes from a continuum of breeding methods farmers have been using for decades.” She explained that USDA Animal and Plant Health Inspection Service (APHIS) has worked for nearly 40 years to hone regulatory expertise to create sound policies and regulations that foster innovation and ensure product and agricultural safety.

“In 2020, after decades of experience and advances, APHIS began shifting their regulations to recognize biotechnology as a conventional breeding tool when used to develop plants that are also achievable through traditional breeding methods,” she said. “The impacts of these exemptions have been substantial,” Moffitt said that since 2020, small- to mid-sized companies, rather than large and well-funded entities have dominated innovative biotechnology advances. She said that it goes beyond traditional row crop developers. “Developers are not innovating with plants like ornamentals, vegetables and fruit trees and traits aimed at improving nutrition and the use of natural resources. Importantly, APHIS has kept their eye on implementing policies that enable producers to grow products that are best for them by promoting coexistence of biotechnology, conventional and organic crops.”

Regarding international collaboration, she emphasized, “We have had trilateral technical working groups between the United States, Mexico and Canada that meet regularly to discuss biotechnology advancements and regulatory decisions.”

During the Q&A session, Seed World U.S. editor Aimee Nielson asked Undersecretary Moffitt to talk about the importance of modernized regulations and their potential impact on the global competitiveness of the American seed sector. “Certainly, I’m not a seed developer, but I know as a farmer, being able to really approach a government that is working together, that understands what each other is working on ... helps new companies, companies that are not just new, but also smaller in size and scope and don’t have the same resources, be able to navigate the regulatory framework and much more coordinated approach and be able to understand where to begin and how to navigate our regulatory framework here in the United States,” she responded. SW
The Asia and Pacific Seed Alliance (APSA) - World Vegetable Center Vegetable Breeding Consortium held its 8th annual workshop 7-8 May at WorldVeg headquarters in Shanhua, Tainan. In attendance were 73 participants from 38 consortium companies, from Hong Kong, China, Chinese Taipei, India, Indonesia, Japan, Malaysia, Philippines, Sri Lanka, Thailand and also Brazil, two staff from APSA, and 20 WorldVeg scientists, for two days of presentations, information exchange and discussions on the Center’s breeding work and field evaluations of elite breeding lines.

At the opening, WorldVeg Director General Marco Wopereis declared that “This consortium is essential for developing new varieties that farmers need through a solid working relationship with the private sector. I was happy when it started in 2017 with 19 companies, and to see it has expanded to 50 members in 2024”. APSA Executive Director Francine Sayoc lauded the successful partnership platform. “The fact that APSA and WorldVeg have sustained the breeding consortium for more than a quarter of APSA’s three-decade history is a testament to the effectiveness of public-private collaboration”, she said.

Vegetable breeding updates were presented by WorldVeg scientists. Tomato breeder Assaf Eybishitz explained the new elite tomato lines, pepper breeder Derek Barchenger shared progress in developing new disease-resistant lines of chili and sweet pepper, and cucurbit breeder Anthimos Kampouridis noted successes in developing new higher yielding bitter gourd and pumpkin lines. Head of Molecular Genetics Roland Schafleitner described the use of high throughput phenotyping and molecular characterization for more rapid advances in vegetable breeding, and Plant Pathologist Ricardo Oliva presented VeggieMon, a new vegetable disease monitoring system to better inform decision-making on breeding needs.

Selected ideas for new special projects were shared for consortium members to consider, and these were further developed during breakout groups on tomato, pepper and cucurbits. There were also more than 50 one-on-one meetings.
between consortium companies and WorldVeg scientists to discuss specific company needs, and participants also gave their ideas for future consortium development in plenary.

Special recognition was given to three companies for commercializing the largest number of vegetable varieties based on WorldVeg germplasm in 2023 – PT. East West Seed Indonesia (EWINDO), Namdhari Seeds Pvt. Ltd., and Kalash Seeds Pvt. Ltd. Awards were also presented to companies who sold the largest quantity of seeds based on WorldVeg germplasm, to Chia Tai Co. Ltd. (tomato), PT. East West Seed Indonesia (EWINDO) (pepper), Ankur Seeds Pvt. Ltd. (bitter gourd) and Clover Seed Co., Ltd. (pumpkin).

Always a highlight was the opportunity to take a close look at WorldVeg breeding materials, in field trials of fresh market tomato lines, new cytoplasmic male sterile lines of hot and sweet pepper and bitter gourd F1 hybrids with good fruit quality and multiple disease resistance. Participants also visited the WorldVeg genebank and new research building to better understand the crucial processes for long-term germplasm conservation and characterization. Participants also visited Jiuru Fruit and Vegetable Wholesale Market, Known-You Seed Co. Ltd., Hakkoda Farm, and the Organic Ecological Demonstration Farm at Qinan Branch of Kaohsiung District Agricultural Research and Extension Station.

The event concluded with a strong commitment to further collaborate and innovate plant breeding together for their mutual advantage, to better serve farmers in Asia, and to help them respond to climate change with new and better seeds of adapted vegetable varieties.

Impact generated by consortium members

WorldVeg Flagship Leader for Enabling Impact Pepin Schreinemachers, shared results of a survey of past and current members that assessed the use of WorldVeg germplasm and quantified the impacts. This showed that an increasing number of seed companies are using WorldVeg pepper, tomato, bitter gourd and pumpkin germplasm in their breeding programs.

The number of vegetable varieties on the market containing WorldVeg-developed germplasm increased from 47 in 2017, to 177 in 2023, and total seed sales of these varieties increased from 24.7 tonnes in 2017 to 63.6 tonnes in 2023 – enough to plant 277,600 hectares and reach 738,000 farm households.

Full survey results: tinyurl.com/SurveyWorldVeg24
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Critical progress was benchmarked during the annual midterm meeting of the Working Group of Integrated Vegetable Seed Companies (WIC), held in Bangkok 24 April 2024. Mr. Takahiro Ando commenced proceedings with an announcement that this would be his last meeting as WIC Chair, citing increased responsibilities as APSA Treasurer; further to this; likewise, Harry Singh would also step down as group co-chair. Mr. Ando then nominated Mr Sanjay Kumar Singh from Syngenta (joining online) as the new Chair and Dr Ha Thuy Nguyen from Bayer as the Co-chair – approved by the group through unanimous applause.

The meeting then proceeded with the tabling of several burning issues affecting regional seed business. First among them were issues concerning the recently implemented variety registration system in Viet Nam; as previously reported, a number of international and local seed companies have alleged that their commercial seed variety names had been infringed in the haste of implementing the new system on a ‘first come, first serve’ basis, which did not facilitate verification or review of existing varieties’ commercial names. As a proposed resolution, WIC agreed to engage concerned authorities in coordination with the Viet Nam Seed Trade Association (VNSTA), CropLife Asia and CropLife Vietnam submitting a list of infringed names and clarifying the estimated economic impacts. Further to this, the group plans to organize a workshop in the country as part of sustained information exchange and IPR awareness-raising efforts.

Next on the agenda were sustained impacts of Indonesia’s stringent local seed production rules, implemented since 2012. Despite longstanding advocacy efforts to highlight the impracticality of producing all seeds domestically, there are no indications of a reversal in the nationalistic trend, and further political complications are anticipated. Particularly concerning is the exemption of only four crop species from mandatory local production. Initially, six crops were exempted but this number was reduced to four in 2016. Nonetheless, advocacy will continue to be coordinated through local associations—HORTINDO, ASBENINDO, ASBINDO, and KADIN—with priority given to the collection of data on the economic impacts, so as to seek more flexible policy and thus assure Indonesia’s food security. Key strategies discussed include profiling companies, conducting cost comparison analyses, and proposing extensions for amendments and exemptions, not only as short-term stop-gap solutions, but to reinforce a long-term free market approach. Members advocated leveraging Indonesia’s role as a seed hub for re-export and engaging influential growers through collaborative advocacy efforts via ISF, APSA, and CropLife Asia (CLA). This includes showcasing re-export cases and establishing evidence of seed production capabilities. Challenges remain in gathering comprehensive data and necessary position papers to leverage in dialogue with the Indonesian government. APSA’s role in these advocacy efforts will be crucial.

Next, an update was provided on discussions with SIG V&O regarding the formation of a Working Group for Vegetable Seed Production. The proposed charter and objectives for the group were shared, receiving comments, subsequent review, and approval from the Executive Committee (EC), which emphasized the need to ensure a clear distinction between commercial interests and the overall benefits for all members.
One key objective is to identify small seed production companies, engage them in capacity and best practices, and encourage them to become APSA members. WIC will propose benchmarks, and pioneering member-nominees will determine priorities of the group — clarifying the balance between commercial interests and member benefits, engaging small seed companies, and establishing benchmarks through new member participation.

Fueling momentum of the University Connect Program, a task force comprising Mr. Sanjay Bisht, Mr. Arthur Santosh Attavar, and Dr. Chua Kim Aik recently met with APSA Director Francine Sayoc, who relayed progress with 11 universities signing MoUs, and proposing the most feasible steps moving forward. This includes a clear action plan and guidelines, focusing initially on short-term initiatives such as internships, short-term projects, career talks, company visits, and access to webinars and seminars. The long-term vision includes creating a talent pool by engaging with agricultural universities, addressing curriculum gaps, and fostering interest in agriculture among students. Initial guidelines are being developed, emphasizing internships and short-term projects before progressing to certification through participation in webinars, seminars, and the Seed Academy. Companies have shown interest in supporting training needs, particularly in breeding, through scholarships and training programs. The program aims to complement existing successful initiatives and involve a consortium of companies for its implementation. Proposals include establishing internships and short-term projects, supporting training needs, organizing job fairs, setting priorities and a calendar of events, utilizing the annual seed congress for showcasing work and job fairs, and creating a model/framework for collaboration with universities. The next steps involve developing a detailed menu of options and connecting with seed associations and universities for further feedback and response.

Next, an update was delivered on the Disease Resistance Terminology (DRT) project, specifically its Bitter Gourd Powdery Mildew subgroup. DRT lead, Dr. Sumitra Kantrong reported on the project and collaboration with the ISF DRT group, for which a nine-member group was formed to identify different species in various countries. Citing staff changes and delays in the process of obtaining and testing seeds for export to members, progress has been slower than anticipated. In addition to prioritizing administrative procedures in India, the group will also consider sourcing seeds outside India to expedite the process.

Finally, Mr. Harendra Singh provided a brief update on the recently established Seed Innovation and Protection Initiative (SIPI): Recruitment efforts — for new members as well as office bearers — are ongoing, and the organization is on track to hold its inaugural Annual General Meeting (AGM) within the year. On operational priorities, SIPI’s work will commence with awareness-raising initiatives in individual countries through national seed associations in collaboration with government authorities, specifically addressing intellectual property rights (IPR) infringement on the national and regional level.
Why you should produce your seeds in New Zealand with Smith Seeds

The Benefits
New Zealand is one of the world’s leading seed producing regions. Seeds are produced on highly mechanised farms with very experienced growers and all crops are overseen by our leading agronomists who inspect each field every 10 days. Reports on each field are forwarded to overseas customers by email and where applicable, with photographs. It is Smith Seeds’ goal to have our customers as knowledgeable about the progress of each field as our agronomists attending to the crops.

The main production area - Canterbury - is a large alluvial plain, ideally suited to seed production and recognised as such by Asian, European and American merchants who annually have their seeds multiplied in this environment. It has a temperate climate with very low humidity. Irrigation is available to all crops and during the harvest season - the hot dry winds received are ideal for low moisture, high quality seed.

The performance of Smith Seeds Ltd, supplying high quality seeds over decades can give confidence to our customers.

Cleaning and Packing
State-of-the-art seed cleaning and packaging machines in large warehouses complete the process. Seed testing laboratories licensed by the international body, are used to ensure the best available seed quality.

Seed Quality Assurance
When it comes to superior seed quality, we ensure that nothing is left to chance. Smith Seeds monitors crop growth at every stage. Each carefully selected grower receives our exclusive Total Seed Management Programme targeting their particular crop so that yields and quality reach maximum potential.

The programme advises the grower of the best time to plant, an optimum sowing rate, the correct fertilisers to use and expert advice on safe weed control.

Crop Isolation
Also in place now is a world leading, internet program that allows for all individual crop production areas to be “logged on” which immediately shows if there is any chance of a cross pollinating competing crop, within the required isolation distance. If a possible, potential problem appears at that stage, the crop is relocated to another site prior to sowing.
On April 23, the Asia and Pacific Seed Alliance (APSA) held its annual Seed Association meeting in Bangkok, bringing together representatives from the association’s national and local seed trade association members. The meeting provided a platform for in-person discussions and collaboration on strategies to address pressing and priority regional challenges impacting seed trade.

A total of 46 seed sector representatives attended the meeting, hailing from more than a dozen countries and territories, including Australia, Bangladesh, China, Chinese Taipei, Hong Kong, India, Indonesia, Japan, South Korea, the Philippines, Thailand, Viet Nam, the Netherlands, and the United States.

Traditionally organized as a two-hour-long meeting at the end of the year during the annual Asian Seed Congress, the APSA board decided last year to adopt a new format, scheduling the meeting earlier in the fiscal calendar as a dedicated day-long event. APSA President Dr. Manish Patel explained in his opening remarks that this change was aimed at fostering more meaningful collaboration and facilitating regional seed sector growth.

This year’s meeting held particular significance as it coincided with APSA’s 30th anniversary celebrations. APSA Executive Director Francine Sayoc introduced the concept of a ‘health check-up’ of the association, describing it as a perfect opportunity to realign APSA’s values and strategies for the future.

Consequently, the meeting evolved beyond a routine gathering, featuring a strategic session designed to engage member associations in evaluating APSA’s role and function in supporting their respective organizations. This initiative, spearheaded by Sayoc, elicited invaluable feedback on members’ visions for APSA’s future and how the organization can better serve the seed industry in the Asia-Pacific region.

Coming to consensus
The morning session grouped participants into groups to evaluate APSA’s current standing and explore future directions. After discussing internally, a representative from each group presented responses on a flip
chart, which were then shared to the larger group. The interactive session had two primary objectives: to understand the needs and priorities of member associations and to identify strategies for enhanced engagement. Here’s what was revealed:

Who is APSA Today?
Industry Advocate. One of the most universal responses indicated that APSA is is viewed as the voice of the seed industry in the APAC region, providing critical input to governments on policy and regulatory matters, clearing obstacles, and acting as a business partner and problem solver.

Knowledge Facilitator: The association is also widely recognized for its role in information exchange, knowledge sharing, and coordinating region-wide seed innovation and technology trends.

Congress Organizer: Indeed, APSA is widely associated as the organizer of important seed industry meetings that facilitate networking and community building; chief among these events is the annual Asian Seed Congress.

Community Builder: APSA serves as a bridge between seed associations and the broader region, fostering a community of associations and companies and providing a networking platform.

Support or Resources needed the most?
Participants were asked how APSA could best benefit their associations, and to rank their support and resource needs based on importance and urgency. Responses were categorized into "Urgent/Critical" and "Nice to Have" supports:

Urgent/Critical:
- Advocacy support and position papers
- Capacity building through workshops on phytosanitary issues, Plant Variety Protection (PVP), Plant Breeding Innovation (PBI), and Environmental, and standards compliance
- Technical guidance and harmonization of policies
- Trade facilitation and increased government exchanges

Nice to Have:
- Statistics on seed industry trends
- Updates on plant diseases
- Training programs on new technologies
- Study tours and support for UPOV membership efforts

Open Discussion
The morning concluded with an open discussion focusing on three critical areas for APSA’s strategic review: technical affairs and advocacy; member engagement; and finances and operations. Feedback centered around the prioritization of phytosanitary issues, plant quarantine laws, foreign direct investment, IP and PVP, third-party accreditation for field inspections, Essentially Derived Varieties (EDVs), access and benefit sharing (ABS), and illegal seed practices. Further to this, participants called for enhanced engagement of members through improved database management, and for efforts to increase APSA membership with the help of seed associations, while encouraging more expert involvement in APSA’s Special Interest Groups (SIGs) and Standing Committees (SCs) (See page 28-29). Finally, several participants echoed the notion that APSA should focus its financial resources and operations on efforts to improve technical expertise within the Secretariat, while engaging in partnerships and collaborations that facilitate the exchange of knowledge and resources amongst allied regional associations and stakeholder organizations.

Ensuring that APSA remains responsive to the evolving needs of its members, this strategic and reflective session set the stage for a robust discussion in the afternoon on critical issues facing the seed industry, which were also the focus of the two other meetings held concurrently in Bangkok that week (See WIC meeting and PVP Consultation articles on page 16 and 21).

As APSA prepares to formally celebrate its 30 year anniversary, culminating at the 2024 Asian Seed Congress in Sanya, China this 2-6 December, the insights gathered from this "health check-up" stands to be instrumental in shaping APSA's initiatives and strategies, reinforcing its role as a pivotal force in the seed sector across the Asia-Pacific region.
From April 22nd to 25th, APSA joined forces with the United States Department of Agriculture (USDA) and other local and international partners to organize the inaugural Regional Consultation on Genetic Resources, Plant Variety Protection, and Biodiversity. Held in Thailand with support from the National Science and Technology Development Agency (NSTDA) and the International Seed Federation (ISF), the event was part of the Mekong – U.S. Partnership (MUSP) project. This initiative aimed to strengthen food security and sustainable development in the Lower Mekong region through science-based policies.

The consultation included seminars and site visits facilitated by the NSTDA and the Gene Bank of the Department of Agriculture in Pathum Thani Province, focusing on biodiversity and germplasm management. Participants also attended a comprehensive seminar at the Novotel in Bangkok, dedicated to sharing information on plant variety protection (PVP), biodiversity, and access and benefit sharing (ABS). The event brought together governmental representatives from Lower Mekong countries and global seed sector experts to discuss and promote robust PVP systems, high-quality seed movement, and balanced genetic resource access.

Breaking the ice and setting the tone, APSA Executive Director Ms. Francine Sayoc expressed her appreciation for the efforts of everyone who participated in the consultation. She also acknowledged the partners, whose logos were displayed on the screen. The consultation successfully brought together public and private partners, as well as experts from various countries including Thailand, Bangladesh, Cambodia, India, Indonesia, Laos, the Philippines, Vietnam, China, and the Korea and Japan Seed Associations. Ms. Sayoc emphasized that the policy and regulatory framework is highly complex, given the numerous challenges. However, “APSA is committed to facilitating collaborative solutions by convening stakeholders,” she concluded.

Next, APSA President Dr. Manish Patel warmly welcomed all government officials, representatives from USDA, ISF, and other collaborating partners.

He highlighted the success of the Phyto Consultation and stressed the importance of having the right policy in place, particularly regarding the movement of seeds. Dr. Patel emphasized that addressing food security challenges requires Plant Breeding Innovation (PBI), which encompasses discussions about intellectual property (IP), breeders’ rights, and farmers’ rights, all interconnected with biodiversity. He announced that APSA intends to organize this consultation annually, and that the focus would include discussions on plant variety protection (PVP) status, potential updates, and mutual learning.

Additionally, Dr. Patel encouraged participants to share ideas to promote an enabling environment through policy advocacy, ultimately solving challenges and ensuring seed availability for farmers. Highlighting the uniqueness of the APAC region—known for its diversity and dense population—Dr. Patel urged everyone to collaborate and wished for a successful meeting.

Mr. Khalil Hamid, Program Manager for USDA-FAS or APSA, opened the seminar on Genetic Resources and site visits with a candid admission: “I am not qualified to do this, it should have been presented by technical experts,
but it's a good opportunity to learn more." He provided a comprehensive background, explaining that they eagerly embraced the opportunity as it aligns with the first goal under MUSP, which is food security—a mutual objective of APSA and USDA. He emphasized that while much work has been done on genetic resources, countries in the region are at varying levels of advancement. Reflecting on the previous day's visit to gene bank facilities in which participants witnessed Thailand's effective germplasm management firsthand, Dr. Hamid emphasized that successful operations depend on robust systems and mechanisms, not just on a few individuals. Finally, he noted the growing interest in promoting genome editing technology over GM/transgenics, highlighting the need for clear distinctions and effective communication to regulators and the public.

Dr. Shivendra Bajaj, APSA Technical Advisor, provided an overview of the consultation on Plant Variety Protection (PVP) and Biodiversity, emphasizing the critical role of PVP in protecting breeders and facilitating innovation to ensure farmers can access new varieties to sustain food security. He pointed out that the seminar aimed to explore the mechanisms currently in place, acknowledging that there is no single correct approach, as opinions on the best methods may vary. While the UPOV (International Union for the Protection of New Varieties of Plants) system is emphasized, Dr. Bajaj noted that other systems, including sui generis, would also be discussed. The primary objective is to protect the rights of both farmers and breeders, a topic that will be thoroughly explored during the consultation. Attendees will learn about the differences between various PVP laws and how they can complement each other. Dr. Bajaj outlined the lineup of speakers, who will provide updates from different countries and elaborate on three specific topics that were assigned to them.

**Day I: PVP Mechanisms**

Ms. Szonja Csorgo, Intellectual Property and Legal Affairs Manager at the International Seed Federation (ISF), discussed Plant Variety Protection (PVP) as an essential tool for promoting plant breeding and developing new varieties, which are crucial for food security. She began by highlighting the importance of plant breeding, noting that plants provide over 80% of our food, as well as fiber and fuel, making their development vital. She explained that addressing challenges such as diseases requires continuous innovation, which is only possible through significant investment in plant breeding—a complex process involving hundreds of crosses and many years of development.

PVP is critical because it grants breeders the right to authorize the production, reproduction, and sales of protected varieties, generating income through licensing fees. Without this protection, practices like farm-saved seeds can disrupt income generation, creating a gap that hampers further investment in breeding. Csorgo emphasized that PVP is utilized by private breeders, seed companies, farmers, and public research institutions, benefiting a wide range of stakeholders, including farmers, the local seed sector, food producers, governments, and consumers. She stressed that "PVP is a win-win tool because it provides so many benefits to so many beneficiaries."

For PVP to be effective, it needs strong protection and a balance between access and protection. This includes provisions like breeders’ exemptions, efficient application systems, high-quality examinations, and robust enforcement frameworks. Csorgo promoted UPOV 1991 as an ideal system, citing its efficiency and harmonization benefits.

Finally, Csorgo linked PVP to food security, defining it as having reliable access to sufficient, affordable, and nutritious food. While PVP directly contributes to the development of higher-yielding varieties, thereby ensuring sufficient food supply, it also indirectly supports nutritious food production. She noted that PVP aligns with several Sustainable Development Goals, including Goal 2 (Zero Hunger), Goal 1 (No Poverty), Goal 8 (Decent Work and Economic Growth), Goal 13 (Climate Action), Goal 15 (Life on Land), and Goal 17 (Partnerships for the Goals).

The rest of Day 1 on Plant Variety Protection (PVP) featured presentations from national representatives of Bangladesh, Cambodia, Indonesia, India, Laos, Korea, the Philippines, and Vietnam, who discussed their respective PVP mechanisms. They focused on the key similarities and differences from UPOV, specifically providing insights into how farmers’ rights are protected, and cited relevant provisions in their national PVP laws and regulations.

Mr. Manabu Suzuki, Technical/Regional Officer (Asia) for UPOV, provided an update on recent developments and activities in the Asia-Pacific region via a remote presentation. He explored how the PVP system supports both farmers’ and breeders’ rights. This was followed by another comprehensive online presentation from Ms. Szonja Csorgo, Intellectual Property and Legal Affairs Manager at the International Seed Federation (ISF).

Two special presentations showcased strong national-level models of cooperation. Ms. Cam Thi Hang of the Office of Plant Variety Protection, Department of Crop Production in Vietnam, discussed how farmers’ rights are addressed and balanced within the UPOV framework. Dr. Kwanghong Lee, an Agricultural Researcher at the Korea Seed & Variety Service and APSA EC member, highlighted the effectiveness of Korea’s IP protection regulations and enforcement mechanisms in generating confidence among both private and public sectors.

The final presentation of the day was given by Mr. Marc Cool, Global Seed Policy Lead at Corteva Agriscience Ltd., who provided a private sector perspective on the role of breeders and the importance of PVP. This diverse array of presentations offered a comprehensive overview of the current PVP landscape and its implications for farmers, breeders, and national agricultural policies across the region.

**DAY II: ABS Mechanisms & Conclusion**

On the second day of the consultation, the focus shifted to Access and Benefit Sharing (ABS) of Genetic Resources. The day commenced with an introduction to ABS mechanisms by Ms. Szonja Csorgo, Intellectual Property and Legal Affairs Manager at the International Seed Federation (ISF). She provided a comprehensive overview of the Convention on Biological Diversity (CBD), the Nagoya Protocol, and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), including aspects such as the Standard Material Transfer Agreement (SMTA), the enhancement of the Multilateral System (MLS), and the funding mechanism. This session laid a strong foundation for understanding this complex topic.

Following this, national representatives from Malaysia, Bangladesh, Cambodia, China, India, Indonesia, Laos, the Philippines, Thailand, and Vietnam presented their countries’ biodiversity regulations and key policies enabling ABS of genetic resources. They discussed their status as parties to the CBD and/or ITPGRFA, provided overviews of their ABS systems, and explained how users access plant genetic resources through national
gene banks and conservation systems. The session also allowed participants to share their expectations from ongoing discussions at the CBD and/or ITDG.

In the afternoon, the discussion turned to Digital Sequence Information (DSI) and its implications for ABS negotiations. Dr. Jasmina Muminovic, Global Germplasm Lead at Bayer, presented the private sector's perspective, advocating for keeping DSI free from ownership to ensure it remains widely accessible to breeders for innovation. Ms. Rosa Villanueva, Group Head - Legal at East-West Seed International Ltd., followed with insights into how the ABS mechanism operates within her company. Ms. Csorgo then explained the SMTA, while Dr. Muminovic concluded with the seed sector's expectations for upcoming events (COP/MOP), emphasizing that while ABS is necessary for plant breeding and innovation, DSI should not be owned by any one entity as it is a tool for innovation rather than innovation itself.

The session closed with Mr. Khalil Hamid of USDA initiating a discussion on future steps and collaboration. Ms. Tidakul from the Thailand PVP Office highlighted several key points regarding Plant Variety Protection (PVP) in Thailand. She noted that many policymakers in Thailand are unfamiliar with PVP, recognizing only patents and trademarks. She urged the private sector to advocate for the importance of PVP and expressed concern about the limited resources at the PVP Office, which is staffed by only ten officials handling both PVP and ABS. Tidakul called for training and site visits to countries with advanced DUS (Distinctness, Uniformity, and Stability) testing to improve the quality of DUS reports in Thailand and encouraged regional cooperation to enhance DUS standards. She envisioned standardized DUS testing across the region, facilitating mutual recognition of DUS reports and reducing redundant testing for new plant varieties.

Participants, especially from the Mekong subregion, were encouraged to institutionalize discussions and collaborate on genetic resources, biodiversity, and policy development. They were also urged to pursue funding opportunities for public-private partnerships emphasizing capacity building and awareness on ABS, DSI, and PVP mechanisms. The importance of enhancing transparency, objectivity, and harmonization within the region was stressed, along with creating a common negotiation platform to update guidelines and standards. Standardizing seed testing laboratories and ensuring accreditation were also highlighted, particularly in comparison to private seed companies and international standards. Participants emphasized the need for collaboration between countries, sharing experiences from nations like the Philippines and Singapore.

Action items
- APSA will follow up with countries willing to support each other in capacity building for seed testing.
- Seed Associations will share positive experiences and advocacy efforts in future forums to support collaboration and knowledge sharing.
- APSA will collaborate with Japanese colleagues on EAPVP meeting and support translation of guidelines.
- ISF and APSA will provide guidance to individual seed associations on ABS topics and policy advocacy.
Sanya, China, the host city of this year’s Asian Seed Congress, is not only a popular tourist destination renowned for its stunning natural landscapes and unique climate but also a strategic Chinese agricultural innovation hub. In this Asian Seed exclusive, we unveil Sanya's transformation into a key player in the global seed industry, highlighting its achievements and future prospects as it prepares to host delegates later this year for the APAC seed sector's most important affair.

Opening a map of China, at the southernmost tip of Hainan Island, you will find Sanya nestled between an extended coastline and surrounding mountains. Located south of 18 degrees north latitude, it is a tropical coastal city where tourists come to enjoy both tropical rainforests and ocean scenery. Each year, it attracts over 25 million tourists from around the world to relax and revel in the region’s optimal climate.

The annual average temperature in Sanya is 25.4°C, with monthly average low temperatures ranging from 17.4 to 21°C. The area receives 2,563 hours of sunshine throughout the year and has an annual average rainfall of 1,279 mm. The abundant sunlight and heat, along with continuous moisture brought by the trade winds, combined with the narrow terrain facing the sea against the mountains, create a tropical marine monsoon climate. This transforms Sanya into a “natural greenhouse.” This unique climate and natural landscape make Sanya an extremely attractive tropical coastal tourist city and a suitable area for cultivating various crops, especially tropical ones, filling the region with possibilities.

An Ag Hub of Increasing international importance

Traditional main crops in Sanya include rice, sweet potatoes, peanuts, and sugarcane, while main tropical
crops include rubber, coconuts, and areca nuts. Main fruits grown in the region include bananas, mangoes, pineapples, jackfruits, and papayas. Each year, more than 500,000 tons of high-quality tropical fruits from Sanya “fly” to dining tables in over 100 cities across the country and are exported to overseas markets such as Singapore, Canada, and Germany, generating an annual sales revenue of nearly 8 billion yuan. Sanya is also a famous winter vegetable production base in China. Every winter, a large quantity of quality vegetables such as cowpeas, loofahs, cucumbers, bitter gourds, and eggplants are transported to various parts of China. The unique photothermal conditions also make it possible to carry out off-season breeding during the winter in the Northern Hemisphere. Since the late 1950s, breeders from all over the country have gathered in Sanya, Lingshui, Ledong, and other places in Hainan like migratory birds every winter to conduct off-season breeding. In the early 1970s, a research team led by Mr. Yuan Longping discovered male sterile plants of wild rice in Sanya and successfully developed hybrid rice within three years.

Off-season breeding base

As an important carrier for the construction of the “Off-season Breeding Silicon Valley”, a global tropical agriculture center, and a global introduction and transit base for plant and animal germplasm resources, the construction of Yazhou Bay Science and Technology City in Sanya officially commenced in February 2019. It focuses on creating a highland for science and innovation within the free trade port, centering on plant and animal breeding technology, international seed trade, new variety rights and seed industry intellectual property transactions, and tropical characteristic agricultural science. The goal is to build an industrialized, market-oriented, specialized, and intensive national off-season breeding research base and national tropical agriculture science center.

Over the past five years, the Sanya Off-season Breeding Base has completed the construction of high-standard farmland and has established over 1,500 mu (1 mu = 666.67 sqm) of smart off-season breeding demonstration bases, driving the quality upgrade of 268,000 mu of off-season breeding bases. More than 20 top Chinese agricultural research institutes and university branches, including China Agricultural University and the Chinese Academy of Agricultural Sciences, have been introduced, attracting more than 3,100 related enterprises in the off-season breeding industry to register and settle down.

Continuous efforts have been made to promote the construction of high-energy science and innovation platforms such as the Yazhou Bay National Laboratory and the National Saline-Alkali Tolerant Rice Technology Innovation Center. Four academicians in the field of seed industry have been introduced as full-time staff, seven academician workstations in the agricultural field and two academician team innovation centers have been established, and a total of 889 high-level talents in the field of off-season breeding have been introduced.

In recent years, relying on the policy and institutional advantages of the Hainan Free Trade Port, several regulations and measures have been issued, including the “Several Provisions on Promoting the Development of Seed Industry in
Hainan Free Trade Port” and “Ten Measures to Support the High-Quality Development of Off-season Breeding Seed Industry.”

These provide institutional arrangements for smooth channels for the introduction, exchange, and utilization of germplasm resources, and the integration of seed industry innovation chains, industrial chains, and capital chains. They offer financial support from aspects such as germplasm resource protection and utilization, new variety selection and breeding, and the transformation of off-season breeding scientific and technological achievements. For a better industrial ecology, Sanya issued the “Sanya Yazhou Bay Science and Technology City’s Seed Industry CRO Model Development Plan,” actively incubating the seed industry’s CRO (full-process R&D outsourcing services for breeding research), and accelerating the construction of a commercialized breeding system.

In January 2024, the “National Off-season Breeding Silicon Valley Construction Plan (2023—2030)” was officially printed and issued. Focusing on creating a new situation in the construction of the “Off-season Breeding Silicon Valley” and leading new breakthroughs in international cooperation in agricultural science and technology, the Yazhou Bay Laboratory, together with the Chinese Academy of Agricultural Sciences and several international agricultural research institutions, jointly launched the “Crop Genome Resource Analysis (G2P)” international major science plan.

Relying on the international platform to gather global talent, it comprehensively promotes the integration of production, education, and research in China’s modern seed industry. It is committed to building a national seed industry innovation base, a new engine for the high-quality development of the seed industry, a major platform for international cooperation in seed industry science and technology, and a pilot zone for deepening reform and opening up the seed industry, injecting new momentum into the global seed industry development.

In recent years, Sanya has closely followed the operational requirements of the Hainan Free Trade Port and regional high-quality development goals.

Focusing on the requirements for developing industries such as off-season breeding, deep-sea industry, life sciences, and digital economy, and concentrating on the liberalization and facilitation of trade and investment, Sanya actively adapts to China’s new round of technological revolution and industrial transformation. The city strengthens the deep integration of scientific and technological innovation and industrial innovation, striving to build a benchmark city for the Hainan Free Trade Port.

Since 2021, Sanya has introduced “12 measures” to promote integrated institutional innovation and released an action plan for integrated institutional innovation. In key areas such as yacht industry development, the “five-in-one” comprehensive management system for intellectual property rights, and the introduction and transit of seeds and plants, Sanya continues to accelerate the implementation of integrated institutional innovation achievements. This effort aims to better gather and allocate global resources and support a higher level of opening up. In 2023, Sanya established 236 new foreign-invested enterprises, a year-on-year increase of 24.8%. The city’s actual use of foreign capital reached $840 million, up by 18.2% compared to the previous year.

To actively integrate into the world economic system and promote a higher level of openness, Sanya will embrace a higher level of openness, fully leverage the “two 15%” income tax incentive policies, three “zero tariff” lists, the nation’s first negative list for cross-border service trade, and the shortest negative list for foreign investment access under the free trade port policy. Leveraging its locational advantages and policy synergies, Sanya is committed to becoming an important intersection for both domestic and international dual circulation, continuously expanding the space for international economic and trade cooperation.

As Sanya continues to advance its position as a global leader in agricultural science and innovation, it proudly steps into the spotlight as the host of the upcoming Asian Seed Congress. From December 2 to 6, 2024, the city will welcome delegates from around the world to the Mangrove Tree Resort, co-hosted by the Asia and Pacific Seed Association (APSA), the China National Seed Trade Association (CNSTA), and Sanya City. This event will underscore Sanya’s pivotal role in the seed industry and its commitment to fostering international cooperation and development in agricultural science.
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Creating Tomorrow Today
Updates from APSA Technical Affairs

Standing Committee on Plant Breeding Innovations

An upcoming webinar on Plant Breeding Innovation (PBI) is being organized by the APSA Plant Breeding Innovation Committee together with ISF. This event is scheduled for August 13, 2:00 – 3:00 pm GMT+7. As it stands, the APSA secretariat is actively involved with the committee members in setting up an organizational committee specifically for this webinar. Currently, the secretariat and the committee members are engaged in discussions to finalize the topics that will be covered during the webinar. These discussions are aimed at ensuring that the webinar addresses the most relevant and current issues in the field of plant breeding innovation. By doing this, they hope to provide valuable insights and updates to participants, fostering a better understanding of PBI and promoting advancements in the field.

Standing Committee on Intellectual Property Rights and Biodiversity

The committee congratulated the new Chair of APSA SC IPR & Biodiversity, Mr Fabrice Mattei, Principal and Head of Patent Group and Head of Climate Change Group from Rouse & Co. International (Thailand) Ltd.

The APSA PVP & Biodiversity Consultation was successfully organized for the first time on April 24-25 in Bangkok, Thailand, showcasing the public–private partnership. More details on pages 21-23.

On another note, we are pleased to share that on May 24th WIPO member states approved the Treaty related to Intellectual Property, genetic resources and associated traditional knowledge. This is a historic breakthrough that capped decades of negotiations. The Treaty, once it enters into force with 15 contracting parties, will establish in international law a new disclosure requirement for patent applicants whose inventions are based on genetic resources and/or associated traditional knowledge. Several legislations in Asia (for example Indonesia) have already enacted a similar disclosure requirement. For more info, visit our newsletter on seed industry news at: International Seed Industry News - APSA Seed.

Standing Committee on Seed Technology

The first session of the 2024 APSA Seed Technology Webinar series on seed extraction and post-harvest handling of seeds was successfully conducted on June 21st, with almost 150 attendees joining from private and public sectors, making as the most popular webinar in APSA so far. Three distinguished speakers—Tim Loeffler of Seed Vigour Consulting LLC, Alan Gaul from the ISU Seed Science Center at Iowa State University, and Rajiv Iyer of GTE Technology Australia—shared their expertise on the theme “Innovation in Seed Supply Chain.” to participants in both private and public sectors.

In the meantime, the working group of Seed Technology Webinar session 2 are ready for the upcoming webinar session 2 on Seed Health Testing to be held on July 11th.

Special Interest Groups on Field Crops

The APSA SIG Field Crops committee convened the 2nd quarter meeting to discuss several key agendas, including plans for an upcoming study tour focused on significant crops such as corn, hybrid rice, and other essential field crops. Following a member poll, Vietnam emerged as the preferred destination with 49% of the votes, surpassing options like India and Thailand. Committee members are now actively gathering detailed information to enhance the tour with additional crops and sites, ensuring a comprehensive and educational experience.

Looking ahead, the committee is excited to announce the development of a Field Crops study tour program in Vietnam, tentatively scheduled for September or October this year. The program will include visits to both public and private institutions specializing in rice and corn. Stay tuned for more details as we finalize the itinerary and registration process!
The committee held its second-quarter meeting in May to discuss and brainstorm several important topics. These included planning for the 11th Phytosanitary Expert Consultation scheduled for 2025 in Bangkok, amendments and industry input. The committee agreed on action points to follow up on in the coming months. Stay tuned for further updates!

**Special Interest Group on Vegetables and Ornamentals (SIG Veg & Orn)**

In June, the SIG V&O committee convened for its second-quarter meeting, highlighting updates from its subgroups: R&D AG, DRT, and WIC. The meeting welcomed Mr. Sanjay Kumar Singh and Dr. Ha Thuy Nguyen, the new WIC Chair and Co-Chair, who provided updates on WIC activities. Looking forward, the SIG V&O committee, alongside the APSA Secretariat, is exploring the possibility of organizing a study tour focused on urban and hi-tech farming in Singapore and Malaysia.

During the meeting, the committee expressed satisfaction with the initiatives and activities undertaken by the WIC, DRT, and R&D Advisory Committee subgroups this year, benefitting APSA members. They also initiated discussions to identify potential speakers for the December ASC Technical Sessions in Sanya.

**The Working Group of Integrated Vegetable Seed Companies (WIC)**

The APSA WIC meeting on April 22nd marked the successful transition with Mr. Sanjay Kumar Singh from Syngenta as the new WIC Chair and Dr. Ha Thuy Nguyen from Bayer joining. We warmly thank ex-Chair Mr. Takahiro Ando and ex-Co-Chair Mr. Harendra K Singh for their remarkable contributions over the past two years.

During the meeting, 22 WIC members and 4 observers engaged in interactive discussions on policy updates, including variety registration in Vietnam and Indonesia's seed production rules. Updates were also provided on ongoing initiatives such as the APSA University Connect Program and efforts related to Disease Resistance Terminology and the Seed Innovation and Protection Initiative (SIPI).

Addressing ongoing issues, WIC members and the APSA Secretariat have been proactive in addressing variety registration challenges in Vietnam. A recent meeting with the Director General of the Department of Crop Production in May was productive, laying groundwork for future steps including a proposed consultative workshop to discuss regulatory amendments and industry input.

In June, activities under the WIC initiative were highlighted at the APSA Executive Committee meeting. This included a report on the University Connect Program, where WIC members collaborated to develop an action plan and guidelines. The focus was on short-term initiatives and creating a framework for collaboration with universities and seed associations.

**The DRT Working Group**

In early April, the bitter gourd powdery mildew subgroup and the watermelon fusarium wilt subgroup held productive meetings to update their progress.

The bitter gourd subgroup has decided to explore alternative sources of bitter gourd seeds for research purposes. Acsen AgriScience is currently assessing seed quantities per variety to meet export test requirements, with other members confirming adequacy for testing in their countries. In June, APSA Secretariat submitted a request for an extension of the research timeline to the National Biodiversity Authority of India.

Meanwhile, the watermelon subgroup has successfully harvested seeds and is preparing for distribution. Discussions among members, including Chia Tai sharing phytosanitary requirements, are ongoing to finalize seed distribution logistics.

**The R&D Advisory Group**

The APSA R&D Advisory Committee extends heartfelt appreciation to Dr. Shreeshil Hadapad from Indo American Hybrid Seeds, who has been a valued member since 2021. We wish him all the best in his future endeavors and look forward to crossing paths again.

In April, the Committee and the ASCRT Organizing Chair made the difficult decision to shift the date and venue of APSA Asian Solanaceous and Cucurbit Roundtable to be in Bangkok, Thailand on September 24-26 (more details page 2). On another note, the APSA-ICAR/IIHR collaborative project on "Breeding for Chilli Leaf Curl Disease (ChiLVD) and Southeast Asian Thrips (Thrips parvuspinus) resistance in Chilli" has received approval from the Indian government. Registration has reopened for the 3-year collaborative project titled "Breeding for Chilli Leaf Curl Disease (ChiLVD) and Southeast Asian Thrips (Thrips parvuspinus) resistance in Chilli" with ICAR-Indian Institute of Horticultural Research, Bangalore, until July 15, 2024.

In June, the APSA R&D Advisory Committee successfully hosted the 2024 APSA Large Seed Vegetables & Brassicaceae Okra (LSVBO) TGIF Session 2 on Okra. Dr. Pitchaimuthu M. and Dr. V. Venkatarananampa from ICAR-Indian Institute of Horticultural Research presented insightful sessions on okra breeding for yield and virus resistance, and the challenges posed by begomovirus in okra. Stay tuned for the upcoming session on cauliflower in September.
HS 1209 raw data is in... and here’s what it reveals about APAC sowing seed trade

The Harmonized System (HS) category number 1209 represents a strategically significant grouping of sowing seeds critical to global efforts to tackle hunger and malnutrition. Indeed HS 1209 contributes significantly to the livelihoods and incomes of a majority of seed growers and traders in the Asia Pacific region. Seeds classified under HS 1209 by the World Trade Organization (WTO) include various types for sowing, such as beet, grass, forage plant, vegetable, and flower seeds, among others. Notably, it excludes seeds used for purposes other than sowing, such as oilseeds and fruits, as well as major field crop seeds like maize, wheat, cotton, and soybean, which will be covered in reports planned for Q3 and Q4 later this year.

APSA has meticulously collected and analyzed data for this category within its member countries’ territories for the year 2023, and hereby highlight a range of peculiar and unsurprising trends in seed movements across Asia and Oceania. Despite regional nuances, the data underscores APAC as predominantly a seed-importing region. In 2023, APSA member countries collectively exported seeds valued at US$ 1.06 billion, totaling 133,563 tonnes. Conversely, they imported 437,654 tonnes of seeds, amounting to US$ 1.68 billion in value. (*See disclaimer at the end.)

The following provides a breakdown and summary of standout trends observed across different countries and territories in the APSA region:

Export Trends

New Zealand’s Dominates, as China, Australia and India also show strength in number

New Zealand exported the highest quantity of seed at 46,446.2 tonnes, representing a share of 34.77% of the total quantity of exports for the region. However, its average price per tonne value of $3,473 was less than half that of the region as a whole.

Mainland China had the highest gross export value in monetary terms, at US$ 155.96 million, representing 14.68% of the region’s total export value. Additionally, China had a relatively high $/tonne value at $30,792 – more than four times the region average.

India exported a significant quantity of 36,946 tonnes, accounting for 27.66% of the total regional exports by quantity. This made it the second-leading country by this measure, behind only New Zealand, with a slightly higher unit value of $3,662 per tonne. Similarly, Australia’s export of 14,767.3 tonnes represented 11% of the region’s total outgoing quantity. Its export value of US$ 93.3 million (8.78% of the region’s total) equated to a $/tonne value of $6,321, indicating a substantial volume of moderately priced seeds.

High Value Exporters vs Moderate Contributors

Chinese Taipei and Japan stood out with very high export values per tonne, at $148,277/tonne and $145,719/tonne respectively. Additionally, Israel and Georgia also had high $/tonne values at $58,156 and $56,208 respectively, indicating an emphasis on higher-quality germplasm exports over lower-value bulk shipments logged elsewhere in the region.

And though countries like Azerbaijan, Bangladesh, and Pakistan managed to log some exports, their respective values and quantities were only marginal fractions of the region’s totals, with $/tonne values of $2,340, $7,511, and $3,471 respectively. Similarly, Vietnam’s 377,777 kilograms of seed exported constituted only 0.28% of the region’s total exported quantity, but its unit value of $71,540 per tonne was much higher than the region average, indicative of relatively moderate value seeds coming from the Southeast Asian country.

Sri Lanka exported only 3,268 kilograms of seed, one of the lowest in the region by quantity, but these consignments had an exceptional unit value of $901,163, indicating extremely high-value seeds, assuming there were no errors in the available figures.

Imports

Imports Prevail in Korea and China

Though China was the region’s leading importer in terms of overall value of consignments, worth US$ 459 million or 27.30% of the total region’s inbound receipts, its 64,055.8 tonnes of imported seed (14.64% of the total quantity) was significantly less than the volume category leader, Korea. Korea imported a whopping 279,629.2 tonnes (63.66% of the total region). These figures reflect a strong demand for imported seeds in both countries, though the respective unit values indicate that Korea has been importing at a much lower cost per unit, emphasizing bulk seed imports.

Expensive Seed Imports

Japan imported US$ 209.55 million worth of seeds, which is 12.46% of the total value, with a high $/tonne value of $18,681. This suggests Japan’s focus on higher-quality or more expensive seeds. Israel and Singapore also stood out in this regard: Israel’s unit value was $57,638 per tonne while Singapore’s $/tonne value is $45,667. Other importers that logged strikingly high unit-value imports include Palestine, importing at an average of $116,898/tonne (though it only imported a marginal 15.07 tonnes); and Sri Lanka, which imported US$ 10.51 million worth of seeds at an average unit value of $30,028 per tonne.

Moderate Importers

Australia’s consignment figures reflect a balanced import profile with US$ 122.71 million (7.30% of the total value) and 10,636.4 tonnes (2.43% of the total quantity), with a $/tonne value of $11,536. India, likewise, has a balanced profile with imports worth US$ 158.82 million (9.45% of the total value) and 21,201.3 tonnes (4.84% of the total quantity), and a $/tonne value of $7,491. Türkiye’s 14,325.2 tonnes of imported seed worth US$ 161.42 million represents a 9.60% regional market share, though accounting for only 3.27% of the region’s total imported volume, equating to a moderate $11,268 per tonne. Similarly, Thailand’s moderate 2,440.4 tonnes of seed worth US$ 30.68 million equates to $12,570 per tonne.

Smaller Importers with Relatively Expensive Consignments

Several smaller importers logged relatively expensive inbound consignments compared to the region average. Vietnam, for example, imported 3,629.7 tonnes valued at US$ 28.95 million ($7,975 per tonne), while Hong Kong, China had a unit value of $16,168 per tonne – it imported 2,406.5 tonnes of seeds worth US$ 38,911. A handful of countries imported seeds in small quantities and values: namely, Laos imported US$ 27,000 worth of seeds at a $/tonne value of $1,127, while Brunei imported US$ 157,000 worth of seeds with a $/tonne value of $12,970. Bangladesh imported a significant quantity of 7,468.3 tonnes (1.71% of the total quantity), but its lower $/tonne value of $3,397 was more on par with the regional average. Myanmar and Nepal showed similar trends with low import values but considerable quantities, reflecting lower cost per unit imports.
### 2023 APSA Leading Exporters: HS 1209

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<th>Exporter</th>
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**Disclaimer**

This dataset referred to in this report has been meticulously compiled using the WTO’s Trade Map database, which sources information directly from national statistics authorities. In cases where direct reported data was unavailable, mirror data has been utilized. Mirror data refers to the import data reported by the trading partner of the country in question. Countries for which mirror data has been used are denoted with an asterisk in the raw data tables. Due to the nature of statistics reporting, the data covered in this report may contain errors or be incomplete due to the inherent limitations and complexities of statistics reporting. Asian Seed Magazine assumes no liability for any discrepancies, errors, or omissions in the data. The information provided is intended solely for research and general reference purposes. Users of this data should exercise due diligence and consider cross-referencing with other sources to validate the information for critical applications. The raw analyzed data will be available to APSA members via its membership platforms. Questions and queries can be directed to steven@apsaseed.org
### APAC 2023 Leading Importers: HS 1209

**Importers**

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<th>Importer</th>
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<th>% of region</th>
<th>2023 (kilograms)</th>
<th>% of region</th>
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<td>Israel</td>
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<td>Japan</td>
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</table>

### APAC Import Market Size: US$1.681 billion

Data Source: WTO Trade Map Tool
APSA New Members

Henan Kanglong hi-Tech Seed Co., Ltd.
NO.1 Shiqu Road, Cheng Liu Town, Jiyuan City, Henan Province, China

Safal Agro Industries Pvt Ltd
3 haritkanti Building, Market yard, Ahmednagar, Maharashtra 414001. India

Crop Power Sdn Bhd
Lot 8057, Jalan 4D, Sekysen U6, Kampung Baru Subang, Shah Alam, Selangor Darul Ehsan, 40150. Malaysia

Atariya Noen Co., Ltd.
1103 Atamagawa, Katori-shi, Chiba 289-0392. Japan

Paras Genetech Pvt Ltd
B-209, Rudra Arcade, Opp. Helmet Circle, Memnagar, AHMEDABAD, GUJARAT 380052. India

ORIAMA Seeds
House No. 25, Road, Kaghan Block, PGEHS, Gujranwala, Punjab 54560. Pakistan

CHIGURU SEEDS PRIVATE LIMITED
2203/49, New Sayyajirao Road, Near Bamboo Bazar, Mysore, Karnataka 570021. India

Sarpan Seeds
NH-4, Bypass, New Basawa Colony, Belgaum Road, opposite Air Tech, Dharwar, Karnataka 580004. India

Qingdao Golden Ma Ma Agricultural Science & Technology Co., Ltd
West of Sun, Jiatuan Village, Guhe Community, Laixi City, Qingdao City, Shandong Province, China

PT. Tunas Agro Persada
Jl. Raya Semarang Demak KM. 10, Sayung, Demak, JAWA TENGAH, 59563. Indonesia

Taigu County Defeng Seed Industry Co., Ltd
Han Village, Taigu District, Jinhzhong City, Shanxi Province, China

KWS Vegetables B.V.
Bronland 10, Wageningen, GLD, 6708WH. Netherlands

Shiva Agro Seeds Private Limited
Nahana Chandi, Abhanpur, Raipur, Abhanpur, Chhattisgarh 493661. India

Lankem Ceylon PLC
98, Sri Sangaraja Mawatha, Colombo 10, Colombo, Western Province, 00100. Sri Lanka

Changji Agrich Seeds CO., Ltd.
No.23 LYZHOU HUATING, LYZHOU ROAD, Yan’an road, Changji, Xinjiang, 831100

KUANG TAI METAL INDUSTRIAL CO., LTD.
No.8, Luke 3rd Rd., Luzhu Dist., Kaohsiung City 821, Taiwan (R.O.C.), Address 2: No. 20, Gongye Rd., Guantian Dist., Tainan City 720, Taiwan (R.O.C.).

Anhui Jintai Seed Industry Co., Ltd.
Room 1706, Building D, Xincheng International, No. 999, Dongliu Road, Government Affairs District, Hefei City, Anhui Province, China

ANHUI SUNGU AGRITECH CO., LTD.
SHENGGU AGRICULTURAL INSPECTION BUILDING, SOUTH OF FOREST AVENUE, INDUSTRIAL CLUSTER AREA, ZIPIENG TOWN, FEIXI COUNTY, HEFEI CITY, ANHUI PROVINCE, CHINA

FARMER SEED AND AGRICULTURAL CO., LTD.
NO. 18, LANE 617, CHUNG SHAN ROAD, FU AM VIL., SIU SWEI HSIANG, CHANGHUA, Taiwan

Li He Agriculture (Huizhou) Co., Ltd.
29B, Jin Feng GE, Jun Hua Building, No. 8 Mid Huizhou Road, Huizhou, Guangdong, China, 516003

Way Seed Agriculture Tech (Beijing) Ltd.
Nansanhuan Road, Genghalianhe Building 1306, Fengtai District, Beijing, China

Guangzhou Honghai Seed Co., Ltd.
No.105, Longyueju, Fengtai Community, Taihe Town, Baiyun District, Guangzhou city, Guangzhou Province, China, 510540

Hebei Kairuote Machinery Manufacturing Co., Ltd.
Hujiazhuang Village, Hujiazhuang Township, Laishui County, Baoding City, Hebei Province, China, 074100

Kiao Farming
8 F.-15, No. 25, Chenggong 2nd Rd., Qianzhen, Kaohsiung, Taiwan, 806614, Chinese Taipei

Jiangxi HuaNong seed Co., Ltd.
No 888, west of jianshe road, Xihu, Nanchang, Jiangxi, China, 330006

Genetwister Technologies B.V.
Nieuwe Kanaal 7b, Wageningen, Gelderland, 6709 PA, Netherlands

FUZHOU GOLDEN SEED CO., LTD.
Room522-523, No.1 Building, No.256 North Liuyi Road, Gulou district, Fuzhou Fujian China.

Zhejiang Wuwangnong Seeds Co., Ltd.
818 Jiansheyi Road Hangzhou, Hangzhou, Zhejiang Province, China, 311215

Gansu Jiarui seeds Co., Ltd.
No.2-58 South Jiefang Road, Jiuquan, Gansu, China

JiuQuan RuiAn Seed Co., Ltd.
Room 501 Building 36 District A ShiBo HuaYuan JiuQuan(735000) Gansu P.R China

Hetaihua (Beijing) Biotech Ltd.
Room 703, Unit 1, Building
3, courtyard1, Beiqing Road, Huilongguan, Changping District, Beijing, China, 102206

Sichuan Brilliant Seeds Co., Ltd. No. 9-15, Building 9, Zone 1, Sichuan Agricultural High-tech Product Comprehensive Market, 2 Jingyu Road, Jinjiang District, Chengdu City, Sichuan Province, China

CEPHAGRI SEEDS LIMITED NO.583, EAST DONGSHENG ROAD, EAST DONGSHENG ROAD, JIAXING, ZHEJIANG, CHINA, 314000

Inner Mongolia Xuan Feng Agricultural Technology Co., Ltd. Industrial park, Bayanur, Wuyuan county, Inner Mongolia, China, 015100

Xinjiang Mag-Era Seed Co., Ltd. No.17 Yujun Road, Changji High&New Technical Development Zona, Changji, Xinjiang, China, 831100

Al Nour Co. For Imp., Exp. And Commercial Agencies Sahraget El Soghra, Aga, Dakahlia, 35774, Egypt

Anhui First Seed Co., Ltd. 8688# West Changjiang Road, Hefei city, Anhui Province, China, 230088

Beijing Dolan Agricultural Science and Technology Co., Ltd. BAODING BRANCH, Beidaran village, Qingyuan, Baoding, Hebei, China, 071100

Qingdao Jiaxin Seed Co., Ltd. Room 103, Building 3, No. 90, Huadong Road, Qingdao, Shandong, China, 266000

Shenyang Guyuseeds Co., Ltd. No.75-3, No.101, Qixing Street, Shenyang New District, Shenyang City, Liaoning Province, China, 110010

Shandong Weir seed Co., Ltd. Room 6-2710, Qinghao Plaza, No. 44 Gongye South Road, High tech Zone, Jinan City, Shandong Province, China, 250100

TWOWIN AGRICULTURE TECHNOLOGY (hainan) Co., LTD. 16-1-2004 jiahexinjun, east wenhua road, Changji, Xinjinag, China, 831100

Fujian Xiaofu Holdings Co., Ltd. No.19, Tongyou Industrial Park Phase I, Jianyang, Nanping City, Fujian Province, China, 354200

Shandong Huaang Agriculture Development Co., Ltd. 10th Floor, Five Star Building, Nong Sheng Street, Shouguang, Shandong Province, China, 262700

Seed Importers & Producers Association of Pakistan 1st Floor, Siddiq Center, Sheikhupura Road, Gujranwala, Punjab, 52250. Pakistan

ZOEVE SEED CO., LTD. No.58 Longzhou Road, Jinjiang District, Chengdu, Sichuan, China, 610061

Shenyang Mag-Era Seed Co., Ltd. No.15-9, Building 9, Zone 1, Sichuan Agricultural High-tech Product Comprehensive Market, 2 Jingyu Road, Jinjiang District, Chengdu City, Sichuan Province, China, 831100

Inner Mongolia Xuan Feng Agricultural Technology Co., Ltd. Industrial park, Bayanur, Wuyuan county, Inner Mongolia, China, 015100

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ZOEVE SEED CO., LTD. No.58 Longzhou Road, Jinjiang District, Chengdu, Sichuan, China, 610061

Hefei shenggu Optoelectronics Technology Co., Ltd. Room 101, Building 16, Donghu High-tech, Jiulong Road, Shushan District, Hefei City, Anhui Province, China, 230001

Target Genetics 134 Moo 4, Sankamphaeng, Chiang Mai 50130, Thailand.

Xiamen WenXing Vegetable Seed Co., Ltd. No.20 Xiangyue Road, Xiangan, Xiamen, Fujian Province, China, 361101

Horticulture Seed Association of Indonesia (HORTINDO) Plaza Kelapa Gading Blok C No. 48Jl. Boulevard Barat Raya, Kelapa Gading, Jakarta, North Jakarta, 14240. Indonesia

Rijk Zwaan (China) Agricultural Technology Co., Ltd. No.465, Sunjia Village, Yifengdian Town, Jimo District, Qingdao City, Shandong Province, China, 266224

K-Suregrow Agriculture Technology Co., Ltd. Xiangxin Chuanggu Industrial Park, Hefei City, Anhui Province, China, 230061

Dayu Seed Co., Ltd. No.188, National High Way 104, Qing Xian, Cangzhou City, Hebei Province, China, 062650

Progressive Genetics LLC 15150 preston road , ste 210, dallas, TX 75248. United States

Fungi and Plants Co., Ltd. 60 Noam-ro, Doan-myeon, Jeungpyeong-gun, Chungbuk 27902. Korea (Republic of)

Dalian Horti Seed Co., Ltd. No. 46 Gaoneng Street, Hi-tech Zone, Dalian City, Liaoning Province, China, 116023

Asian Solanaceous and Cucurbits Roundtable

ASCRT 2024

24-26 Sep 2024

Bangkok, Thailand

Venue: Chia Tai Auditorium, Sukhumvit 69 and half day site visit at NSTDA
Happy 30th Anniversary!
Congratulations to APSA on the remarkable 30 years of dedication!
Let us all work closely together to achieve a fruitful future in the seed industry!

Linda Chang
APSA Executive Committee

Wishing APSA to be more attractive, productive and to have great success!

Yasheng Yang
APSA Executive Committee

Michel Devarrewaere
Former Chair of SIG V&O

APSA is an extremely necessary organisation that is working to ensure food security in the region. We have come a long way of advocacy, policy matters, and quality seed trade for the region. Going forward the challenges are tough yet solvable. The issues of climate change, disease resistance, PBR, & e-phyto is what we are working towards. I am confident the strong group of APSA will continue to work on these issues and keep on providing solutions to the challenges and proposer for a better seed industry for farmers across the region.

Farhan Tahir
APSA Executive Committee

I wish APSA, the secretariat and incoming APSA Director, Francine Sayoc, all the best for the next 30 years and more. I wish for APSA to continue to interact with the countries in Asia Pacific region and simplify the seed trade for the greater common good.

Mogen Lemonius who was one of the instigators of the creation of APSA back in the days can be proud of this achievement and of what the organization has become.

Michel Devarrewaere
Former Chair of SIG V&O

Please share your memories with us @30years.apsaseed.org
#SeedYouInSanya

#ASC2024