

ASIAN SEED

THE OFFICIAL PUBLICATION OF THE ASIA & PACIFIC SEED ASSOCIATION



Asian Seed Congress 2017

New venue, local partners confirmed



France Seed Study Tour

Report from APSA vegetable seed trip



Phytosanitary Meeting

NPPOs come together with seed stakeholders



Seed for Thought

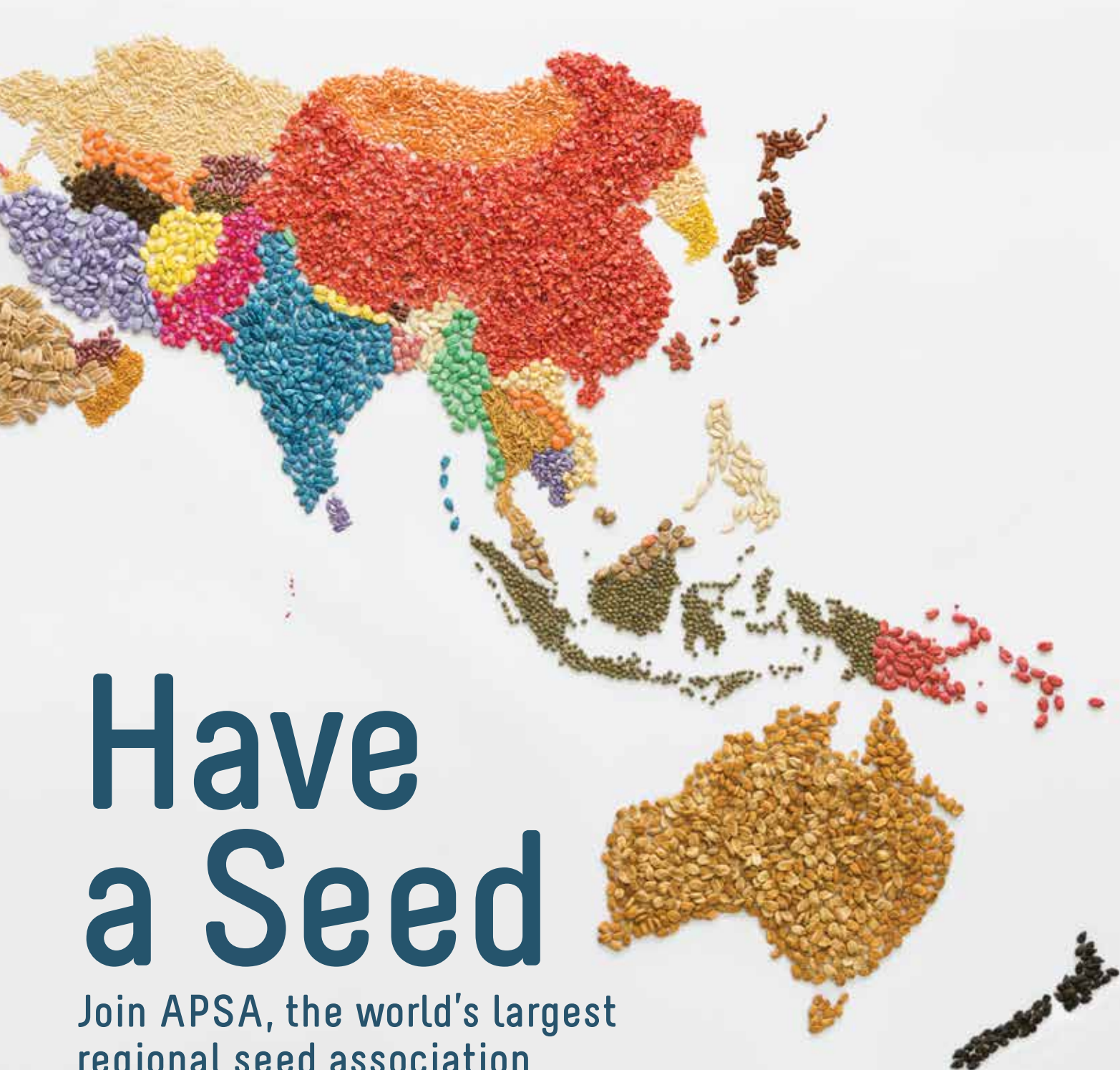
From Los Baños to Bangkok, the early days

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ASIAN SEED

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APSA wouldn't be what it is today if it weren't for this Pinoy woman answering a Bangkok newspaper ad in the early 1980s



Face to Face



Brenda Dossey, APSA President

This great seed industry of ours is a relationship business. Once upon a time, I worked for a very interesting gentleman in the United States who had developed his family seed business into a very large business enterprise, Pennington Seed. Pennington had been a rival to the company I was working for until they purchased that company. All of a sudden, I found I was in the “enemy” camp!

When I got a glimpse of the business that they did and their business model, I was surprised to see all the companies they worked with. They could have easily dominated many of these companies in the marketplace. Instead, they worked with them, collaborating together on various products and projects to help them grow their businesses. I remarked on this one day and asked Mr. Pennington about it.

Mr. Brooks Pennington II stopped for a second and looked at me with a big smile and said, “I never made much money selling seed to my enemies, but I sure have made a lot of money selling seed to my friends.” His point was that it is far more productive to grow and nurture your relationships than

to draw lines and declare sides. I had just learned a valuable lesson and its value is just as important today as it was then. Building and retaining relationships matters.

The Asian Seed Congress in Bangkok this November is going to give you the opportunity to do just that. You will be able to get together with old friends and make new ones. I think one of our jobs at APSA is to make sure that the Congress environment is as conducive as possible for relationship building and development.

Please plan on getting the most out of your Congress experience. In addition to your scheduled meetings, when you are planning your schedule, allow yourself a bit of free time to walk around the exhibition booths and talk to the exhibitors. Maybe consider attending some educational sessions provided by the Special Interest Groups (SIGs) or Standing Committees (SCs). If you leave it up in the air, you might not have time in your schedule to take advantage of the various programmes available to you.

Are you arriving early? Perhaps you would like to participate in the

Pre-Congress Workshop or enjoy some golf? There are lots of different ways to build relationships. Whatever your preference, please plan on making the most of your congress experience to foster your seed industry relationships. If done well, they will serve you for a lifetime.

When planning your meetings this year, please be sure to log in to the APSA website and go to the members area. This is where you can research the other member companies who will be in attendance in Bangkok. You can search by country and their products, and you may even find new possible markets for your products or sources for the seeds you need.

Remember, in spite of all the technology that is at our fingertips now for communication, there is absolutely nothing that has been developed yet that can take the place of meeting with someone face to face. Your participation in the Asian Seed Congress in Bangkok will allow you to do just that. For more details, see the announcements on pages 8 and 9.

See you soon! 🌱



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TAKII SEED

Creating Tomorrow Today

Bangkok Beckons in November



Heidi Gallant, APSA Executive Director

It has been an eventful couple of months at your APSA Secretariat office. We were left scrambling to find a new venue mere months before the Asian Seed Congress 2017, our annual flagship event (read more on page 9).

Luckily, the day we got news of the cancellation from our initial Congress venue in the Philippines was also the first day in the office for our new Events Officer, Mike Kingpayom, and he doesn't scare easily! He was ready to take the reins and find us a new venue and create a new event plan which will see APSA host ASC 2017 in Bangkok this year.

Mike and I were briefly in Manila to meet with the Philippines Seed Industry Association (PSIA), confirming our partnership in the 2018 Asian Seed Congress, which is set to be an even grander affair now with a whole year to plan.

While in the Philippines, we also visited the International Rice Research Institute headquarters in Los Baños, where we toured their rice museum and met with executives to explore future collaboration (more information and photos are on page 11).

Meanwhile, we are mutually enthusiastic to partner with our surprise co-hosts for this year's Asian Seed Congress, the

Thai Seed Trade Association (ThaSTA), who is taking charge at the helm of the National Organising Committee.

Our members are also to be thanked for taking the change in stride. APSA had over 350 delegates and 100 trading tables booked for the congress in Manila, and these members were kind enough to transfer their bookings over to Bangkok for 2017. We thank you for your continued support.

In other news, APSA held its Third Expert Consultation on Phytosanitary Measures in the Asia and Pacific Region on the 29th and 30th of June. We hosted National Plant Protection Officers and National Seed Associations from the region for a meeting on phytosanitary collaboration and capacity building (the full story can be found on page 23).

Joining APSA just in time for this meeting is our new Membership Programmes Officer, Kunaporn Phuntunil. She will be assisting APSA on all of our Special Interest Group and Standing Committee work, as well as coordinating our World Vegetable Consortium and APSA's research collaboration projects (read all about both Kuna and Mike on page 33).

In the coming months, APSA will be recruiting more members for

our Special Interest Groups and Standing Committees. Experience is always a welcome addition to these working groups, but we would also like to encourage more junior members of your companies and associations to join. Committee participation is a great chance to gain valuable insights from other members on important seed industry information. If you would like to join a committee, please log in to your membership account and view the recent committee activities by clicking the "Activities" drop-down menu on the homepage of our website (apsaseed.org).

We are now in the final stages of preparing for Congress. The golf tournament, which is again sponsored by Wuhan Yafei Seed Co., Ltd. this year, will be held at the lovely Thana Siri City Golf and Sports Club. Registration is now open via the Congress page on APSA's website.

Registration for the Pre-Congress Workshop on Climate Change – set for 13 November – will open 1 September, by which time details of our exciting Post-Congress tours will be announced to members. We are looking forward to hosting a memorable event in our home country and welcoming you all to Bangkok this November. 🌱



Team APSA on an inspection tour of the recently confirmed venue for the 2017 Asian Seed Congress.

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Thai Partners and Bangkok Venue Confirmed for 24th Asian Seed Congress



APSA met with officials from the Rice Dept. The meeting was chaired by RD Deputy Director-General Dr. Krishnapong Sripongpankul (5th left).

BANGKOK: APSA is pleased to confirm the Thai Seed Trade Association (ThaSTA) as co-organisers of the 24th Asian Seed Congress, which will be held at the Bangkok Marriott Marquis Queen's Park on 13-17 November 2017.

The partnership between APSA and ThaSTA was confirmed during a meeting last week between executives of the two associations.

ThaSTA will take on its traditional role in our National Organising Committee (NOC), taking the lead to engage the involvement of the Kingdom of Thailand's government bodies.

Representing 58 seed companies and 108 retailers in Thailand, ThaSTA will also assume a customary role at the helm of the NOC by overseeing local sponsorship opportunities and entertainment. In addition to developing the cultural programme to delight and excite our guests during the Opening Ceremony and Gala Dinner, ThaSTA is also overseeing arrangements for the Post-Congress Tour and Accompanying Persons Programme, in addition to providing visa invitation letters for any of our overseas participants who are unable to arrive on a tourist visa.

Finally, ThaSTA will be on hand for advice and consultation on opportunities for the business of seed trade in the Kingdom for all of our international guests.

Several other key stakeholders have confirmed their support, which will be in the form of consultations, expertise and other resource contributions.



Mr. Somchai Chanarongkul, Director-General of the DoAE, chaired the meeting on 22 June.

Public Thai Stakeholders Affirm Support

From the public sector, these include the Rice Department, Department of Agriculture and the Department of Agriculture Extension, while Kasetsart University – Thailand's premier agriculture research and development institution – will be a key partner from the Thai academic sector.

The five-day event kicks off on 13 November with a Pre-Congress Workshop, which will be conducted under the theme of "Breeding For Climate Change". The full-day workshop will facilitate constructive dialogue for breeders and seed executives to learn about and mitigate the growing number of weather-induced threats to seed production. In addition to the trade exhibition, open from 14-16 November, the annual congress will also host technical meetings and seminars,

which are being planned by APSA's three Standing Committees (Seed Technology, Trade & Marketing, and IPR & Biodiversity) as well as four Special Interest Groups (Cover Crops, Field Crops, Hybrid Rice, and Vegetables & Ornamentals). APSA's annual General Assembly Meeting will be held in the afternoon on Thursday, 16 November, when key member representatives will meet to discuss various association matters.

The event concludes with our Grand Banquet Thursday night, while many members will stay on in Thailand to join one of the Post-Congress Tours, where members will have the opportunity to visit a number of seed production sites in the Kingdom on Friday, 17 November.



The NoC is represented above by Wichai Laocharoenpornkul (2nd Left), Dr. Chairerg Sagwansupyakorn (centre), Suwanee Pratuangsit (3rd right), Vinich Chuanchai (2nd right) and Trithip Yusin (far right). Also pictured: Mike Kingpayom (far left) and Heidi Gallant (3rd left).



The meeting was chaired by Uthai Noppakoonwong, DoA Deputy Director-General (front, 2nd left)

Downtown BKK Venue Confirmed

Bangkok Marriott Marquis Queen's Park was confirmed as venue for this year's Asian Seed Congress (ASC) last week following a rigorous selection process.

The change of the host venue, city and co-organisers of this year's Congress, initially planned for the Marriott Manila, was prompted in May after the property informed APSA of travel restrictions contemplated ahead of the 31st ASEAN Summit.

This high-profile regional government meeting, originally scheduled for 10 -14 November in the Philippines' Clark Freeport Zone, was changed for Manila. APSA was subsequently informed that the Philippines Government had requisitioned the property to host the function.

So a hotel in the heart of Thailand's capital is the new venue for ASC 2017.

"We are delighted to be working with the Marriott Marquis Queen's Park as host venue of the Asian Seed Congress 2017 in Bangkok," said APSA Executive Director Heidi Gallant.

"We chose this venue due to the layout of their event space, keeping in mind that our members wish to completely fill their congress schedule with business meetings. The trading tables, booths, meeting rooms and technical sessions are all located quite close to each other," she said.

"The social programmes will also be hosted in the same space and the hotel can accommodate all of our delegates with brand new, beautiful 5-star hotel rooms at

an excellent, competitive rate, as long as they book their rooms early. We are really looking forward to hosting ASC in our home country!"

The hotel's Director of Sales & Marketing, Roger Parnow, is also enthusiastic about hosting this year's Congress.

"Having the opportunity to host the APSA Seed Congress 2017 is a great honour. We are confident that the event will be a great success and are excited to welcome the participants who will experience our renowned Marriott Marquis service and facilities," he said.

Located along Sukhumvit Road in downtown Bangkok, the property is located near popular shopping, business and entertainment districts (see panel to right). 🌆



The venue is located on Sukhumvit Rd in close proximity to many inner-city attractions.



ASC 2017 Venue

- Close proximity to Phrom Phong BTS Skytrain Station.
- 1,360 rooms and suites.
- Three distinctive ballrooms.
- 30 meeting venues boasting over 5,000 Sq m of event space.
- A number of inhouse dining options including Goji Kitchen & Bar, Soba Factory, The Pagoda, and Siam Tea Room.
- Two lounges & 9th floor pool bar.
- Two outdoor pools.

Nearby Attractions

- M District: EM Quartier and Emporium Shopping Complex.
- Terminal 21 Shopping Mall.
- Benjasiri Park.
- Benjakitti Park.
- Stock Exchange of Thailand
- Thonglor-Ekkamai ('hip' nightlife district)
- Nana Plaza (South Asian & Middle Eastern dining)

Please contact us through apsaseed.org for more information about registration and booking of trading tables, booths and hotel discount codes.



ASIAN SEED MAGAZINE ADVERTISING

Asian Seed is the official bi-monthly publication of the Asia and Pacific Seed Association (APSA). It contains in-depth features and articles on the seed industry, including research and development, seed production, processing, marketing, IPR, phytosanitary issues, and general industry highlights. The magazine is distributed to over 65 countries with a pass-on readership of over 4,000.

Bonus distribution at the ISF Congress, Asian Seed Congress and all major seed-related events.

Magazine Formats & Rates	No. 1-4 and 6 USD	No. 5 ASC USD	1 Year Save 10% 6 issues USD	2 Years Save 15% 12 issues USD
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Back Cover 210 x 297 mm (+5mm bleed)	2,900	3,400	16,110	30,430

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APSA Links Up with IRRI

In anticipation and preparation for next year's Asian Seed Congress, APSA Executive Director Heidi Gallant and Events Officer Mike Kingpayome conducted a site inspection in June of the venue for next year's Congress, taking advantage of the opportunity to meet reps from the Philippines Seed Industry Association (PSIA) in Manila and the International Rice Research Institute (IRRI) in Los Baños.

Following the site inspection of the Marriott Hotel Manila, APSA hosted a dinner with a delegation from the PSIA, led by their President, Mary Ann Sayoc, a Past President of APSA.

The following day Mrs. Gallant and Mr. Kingpayom ventured out to Los Baños, about 60 km to the southeast of the Philippines capital, where they visited the headquarters of the International Rice Research Institute (IRRI). They toured IRRI's research facilities, visited the rice museum and convened several meetings with senior officials.

During a meeting with IRRI's Head of Partnerships & Development Michele Weldon and Communications Chief Termina Lalani-Shariff, promising collaborations and business opportunities between APSA and IRRI were discussed.

In a subsequent meeting, Dr. Anilyn Maningas (Associate Manager of IRRI Education) introduced APSA to the various

training courses offered by IRRI, while Ms. Richievel Inanez (Manager, Public-Private Engagement Office) and Ms. Angelica de Juras (Officer, PPE Office) led discussions on private-public cooperation.

After a tour of IRRI's International Rice Genebank and Sorting Processes, which was led by Dr. Kenneth McNally (Senior Scientist of the Genetics & Biotechnology Division), Dr. Shoba Venkatanagappa (Senior Scientist of the Plant Breeding Division) introduced

APSA to the International Network for Genetic Evaluation of Rice (INGER) and Plant Growth Facilities.

The final stop on the itinerary at IRRI was at the "Long-Term Continuous Cropping Experiment" or LTCCE, the visit of which was guided by Dr. Olivyn Angeles (Senior Associate Scientist of the Crop & Environmental Sciences Division).

Look out for rice research collaboration opportunities in the future. 🌱



Dr. Angeles and Mrs. Gallant at the LTCCE.



An automated rice seed sorting machine.

First Global Sustainable Rice Meeting in Bangkok Set for October

APSA has agreed to be a supporting organisation for the First Global Sustainable Rice Conference and Exhibition (GSRCE), which will be held 3-6 October at the United Nations Convention Centre (UNCC) in Bangkok.

Aimed at the full value chain of rice production, the conference is particularly relevant for C-level executives, including business managers, sustainability professionals, researchers, scientists and policymakers – from growers, millers, traders, buyers and retailers, to farm input/service providers, agribusiness companies, technology providers, and members of relevant NGOs and research institutions.

The Conference – which convenes on 3 October with a Sustainable Rice Platform (SRP) Plenary Meeting and a General

Assembly – will be organised into six areas of focus or "tracks", with groups to convene on 4 and 5 October as follows:

- Track 1:** Drivers of Global Rice Sector Transformation
- Track 2:** Global Rice Markets and Food Security
- Track 3:** Technology Convergence and Innovation: Tools for Climate-Smart Agriculture
- Track 4:** Assurance and Smallholder Finance
- Track 5:** Crop Protection, Nutrient and Water Management
- Track 6:** Incentives for Sustainability

Organised by the Sustainable Rice Platform (SRP) with IBC Asia appointed as conference manager, the first GSRCE will conclude on 6 October with field visits, details of which are to be confirmed.



IRRI and UNEP convened the SRP in 2011.

UN Environment (UNEP) and the International Rice Research Institute first convened the SRP in 2011. Now, the SRP is a multi-stakeholder partnership that aims to promote resource efficiency and sustainability both on-farm and throughout the rice value chain. SRP works in collaboration with partners in the public and private sectors, as well as the NGO community. 🌱

For more information, see www.sustainablericeconference.org



Study Tour: Vegetable Seed Production in France

An APSA delegation of fifteen joined the Vegetable Seed Production & Management Study Tour of France 11 to 18 June. Represented were China, India, Indonesia and Thailand. The Tour started and concluded in Paris, and included meetings, field visits and tours of numerous research, farming and production facilities in key seed producing areas in the central, western, southwestern and southern parts of the country.

As a leading agriculture producer and seed supplier in the EU, and indeed the world, France is an ideal country for any Asian agronomist to visit, and fittingly, the tour was fully-booked in record time.

On first impression, the organisation of the French seed industry may seem daunting, comprising a vast and complex network of agencies and organisations whose names, functions and missions often seem to overlap. Yet, as it turns out, these various organisations are complementary, and dependent on one another in ensuring that France continues to be a world leader in seed production, and thus in food security.

First stop on the itinerary was the offices of GNIS, which stands for *Groupement National Interprofessionnel des Semences et Plants*, or, in English, the National Interprofessional Seeds Association. Often mistaken as the National Seed Association of France, GNIS has a much wider scope as an inter-professional organisation, according to Marine Beng-Thi, Head of GNIS' International Relations Department, who went on to introduce GNIS' interesting history to APSA's group.

Situated in the historic Les Halles district – on the site of the city's old central food market and agriculture commodities exchange – GNIS was initially established in 1941 to manage the shortage of seeds during WWII and was developed at a time when the country's agriculture sector was experiencing rapid post-world-war recovery.

France's government saw the need early on for a clearly defined interprofessional body to bring together all entities of seed production.

"GNIS was reorganised by the French Ministry of Agriculture in 1962 and made responsible for the control and certification of seeds, and for facilitating seed regulation in a bustling seed industry," explained Ms. Beng-Thi.

APSA delegates were particularly impressed to learn that, in stark contrast to most Asian markets, all seeds sold or traded on the French market must be certified and comply with EU regulations.

Serving as a key intermediary between all seed stakeholders, GNIS, along with its Official Service for Control and Certification (SOC), facilitates compliance with national and regional seed laws and regulations through certification.

GNIS today is a privately-funded entity, explained Marine, with 60 percent of its budget allocated towards control and certification activities, and the rest for interprofessional missions.

For François Burgaud, Director for Public Affairs and International Relations at GNIS, France's place in the global seed sector's leading ranks relies on a platform of concertation, and on the French organisation's three pillars: plant breeder rights, the official catalog and certification.

Marine Beng-Thi insists that the benefits of such an organisation to farmers may be gauged by the country's 6,000 cultivated varieties – 10 percent of which are new each year.

The scope of GNIS is broad, whose mission is to bring together all stakeholders of the seed industry, providing a public-private forum for dialogue and consultation for continued development.

It goes without saying that certain aspects of the production cycle demand dedicated representation, especially with regards to farmer cooperatives, the core of France's longstanding agricultural tradition.

Enter FNAMS (*la Fédération Nationale des Agriculteurs Multiplicateurs de Semences*, aka, the National Federation for Seed Growers), a union body within the GNIS that serves as an advocate in representing the interests of the country's almost 19,000 seed growers in the country.



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Korean Seed Association

Contracts, Cooperatives & Socio-Economic Harmony



The APSA Delegation, pictured here in Angers with guides from GNIS.

In her presentation on FNAMS, Anne Gayraud, the organisation's Director for Administrative and Labour Affairs, noted that seed disputes in France rarely require legal arbitration because the sector is strongly unified and because precise contracts promote efficient production.

In addition to representing seed farmers through the organisation of contractual relationships and lobbying efforts at national and regional levels, a key focus of FNAMS is its eight research stations' research and development, and their strategic placement in key areas.

Mme. Gayraud explained that 62 percent of FNAMS' research focuses on seed crop protection, especially in the development and trials of plant protection products, demand for which continues to grow in response to climatic and regulatory imperatives.

"Between 70 to 80% of the plant protection products used for seeds crops, including vegetable, forage and sugar beet, will be re-evaluated by the EU in the next three years – with a high risk of withdrawal for some. Finding new solutions is thus a major issue for French seed growers," explained Mme. Gayraud.

She went on to note that the research programme conducted by FNAMS is funded by GNIS in collaboration with seed company experts from UFS (*Union Française des Semenciers*) and seed cultivation experts from FNAMS. The results thereby address issues important to both parties. To communicate results, FNAMS publishes a magazine dedicated to seed production, *Bulletin Semences*.

Another key subsidiary introduced by GNIS is ASFIS, the acronym of which derives from its original name in French: *Association de Formation de l'Interprofession des Semences*. Its full name in French today is "*La Société Française de Formation, d'Expertise et de Conseil de la Filière Semence*". In English, it is referred to as the

French Training, Expertise and Consultancy for the Seed Industry.

This organisation is primarily engaged in training and capacity-building projects, offering tailored seed production training and education services, which was initially only for seed companies and growers in France.

With the broadening scope of their expertise, ASFIS now provides training to foreign companies and organisations such as the UN's Food and Agriculture Organisation (FAO), the World Bank and the EU. They also work with foreign ministries of agriculture, agricultural and economic development agencies and other relevant groups. ASFIS projects facilitate direct access to French expertise and span the seed business spectrum: from regulation and marketing to production, breeding and research, all of which are highlighted in ASFIS' 2017 catalogue.

Across from GNIS on the Rue du Louvre lies the head office of our Study Tour's main organisers, UFS.

There, APSA delegates lunched on refreshing wraps, chocolate and fruit while getting warmly acquainted with some key UFS reps.

Whereas GNIS represents the inter-branch organisation of the French seed sector, UFS functions as a dedicated national seed trade association, representing French seed companies and French subsidiaries of global groups. Founded in 2009, UFS now counts 137 members. Plant breeding, and production and marketing of seeds and

plants for farms, gardens and green space, are their principal areas of interest.

Complementing GNIS' overview of the French seed sector earlier in the day, UFS presentations by Ms. Bourmeau, M. Lesprit, Mme. Contamine and Mme. Garreau provided clarity and insight into Europe's top seed producing country.

UFS Director General Elise Bourmeau explained that her organisation's focus is not limited to domestic or regional concerns, but is wide-ranging and truly global:

"Our prime focus is on regulatory and economic environments, and on allowing initiatives and innovation through various means. These include federating companies in order to represent them efficiently; developing a positive image of trades, companies and seeds; lobbying politicians and decision-makers; and serving members in reinforcing their activities and value addition."

"UFS has three key values: The first is progress, referring to the development of new varieties for agriculture, the food chain and consumers. Next, responsibility, which emphasises safety at the heart of running operations in factories and labs. Finally, we value diversity, in people and equipment, because both combine to serve the plant heritage."

The APSA delegation was interested to discover that some challenges French seed companies face are not at all different from those faced by companies in Asia – notably those involving phytosanitary measures and intellectual property rights.

The French Government's position on seed technologies and products, genetic modification and chemical treatments, is famously conservative, with increasingly restrictive regulations adversely affecting revenue for the nation's seed companies.

Consequently, UFS has a challenging role in facilitating progressive dialogue while bridging the gap between legislators and executives to ensure mutually-satisfactory solutions.

Despite the growing impact of climate change – which threatens significant economic loss – French

seed production has remained robust year-on-year.

As a top seed exporter in the world and leading producer in Europe, France's seed sector had a turnover of €3.4 billion last year and a trade surplus of €901 million – a 23 percent increase over the previous year – with seed representing 43 percent of the country's trade surplus in agricultural products.

When asked what he thought was the main factor for success, UFS Director of Regulation



Elise Bourmeau and Emmanuel Lesprit.

& Innovation Affairs, and head of the Vegetables and Ornamentals Department, M. Lesprit said "France is naturally an ideal seed production country thanks to diverse soil profiles and climatic conditions throughout the country. The success of France's seed sector is also due to a long history of networking and shared know-how between seed multipliers and seed companies."

M. Lesprit added that French innovation drives the seed sector, despite opposition by society of GMOs. He noted that 15 percent of seed trade turnover is allocated to research by French companies involved in breeding activities.

UFS Legal & Regulatory Manager Marine Gareau and Technical Director Anne-Celine Contamine presented their views on some sensitive French seed trade issues.

Mme. Garreau presented some of the intellectual property rights issues UFS deals with in respect to patents and Plant Variety Protection (PVP) certificates – a topical debate the group would hear a lot more about during the rest of their stay in France.

Two approaches to the issue of patenting essentially biological processes were hotly debated by policy-makers during APSA's stay in France.

Under European Patent Office (EPO) regulations, such products may be patented. Other EU institutions don't agree – a view upheld by some EU members, Mme. Garreau said.

"The basic position of UFS is that both PVP certificates and patents are necessary to the seed industry, but both should be used in a balanced way so that uncertainties about the scope of patents for breeders can be limited. UFS advocates harmonising the two interpretations," she explained.

It should be noted that since APSA's meeting with UFS, Mme. Garreau has informed us that the EPO followed the EU's approach and has adopted a new rule that formally excludes plants obtained by such processes from patents under the European Patent Convention.

The final UFS presentation, from Mme. Contamine, highlighted a few more current regulatory challenges and opportunities in the French seed sector.

She explained that the French and European seed sectors face challenges in the coming years due to restrictions on many chemical-based processes now used.

"In 20 years, 48% of the active substances will have disappeared from the EU. The standards to

register new active substances are very high, which reduces the number of new solutions coming," she said.

Mme. Contamine concluded that with heightened social and media pressure, the future of remaining neonicotinoid-derived phyto products is compromised, even if there are still no efficient alternatives on the market and even if the risk of exposure of organisms, like pollinators, can

certified under the ESTA Standard in 15 different countries. ESTA has also extended outside the European Union with treatment sites certified in Ukraine and Turkey."

Finally, M. Lesprit briefly talked about new bio-seed legislation which will come into effect in 2019. He highlighted a number of controversies raised by the new legislation which are currently under debate in

breeding and phytosanitary circles throughout Europe – notably, a ban on untreated conventional seed. This, some fear, will adversely impact seed companies supplying the organic market.

On the positive side for this market, however, will be the introduction of a database to share seed availability for organic

growers, at least in member states, if not across the entire EU.

"The concept of 'organic breeding' was hopefully rejected from the new law, as it would narrow the access of organic growers to genetic progress by restricting the use of certain breeding methods that some consider as GM," concluded M. Lesprit, referring to some of the latest breeding techniques, such as gene editing.



Seed companies face many new challenges, and opportunities.

be minimised through good practices.

Nonetheless, seed sector efforts to ensure the quality of treated seeds are exemplary, she affirmed, lauding the European Seed Treatment Assurance scheme (ESTA) which regulates dust levels and thereby affords protection to pollinators, the environment and farmers.

"Since the beginning of the scheme in 2013, there are already more than 90 sites

Tour de France



Concluding their crash course on the French seed sector in Paris, the group was whisked away on a cozy-yet-speedy train through the picturesque countryside of western France, arriving by early evening at the clean and nostalgic city of Angers in the Maine-et-Loire department. Mme. Beng-Thi accompanied the group, which was welcomed to Angers by Vincent Poupard, regional manager for GNIS' offices in Angers.

Over a GNIS-sponsored dinner that carried on well past 9 pm – typical for the time of year in that part of the world – the group got their first taste of authentic French cuisine at Le Théâtre restaurant, with many sampling, for the first

time, famous French delicacies such as *foie gras* and *tartare*. The evening concluded with M. Poupard leading the group on a short walking tour of Angers' historic city centre, where, in stark contrast to Asian urban centres, one is hard-pressed to find beggars, dangling powerlines or 7-11s. However, there are plenty of medieval churches, shops and cobble-stone streets to see.

In France, summer days are long. Neither people nor the sun retire before 10 pm; and, while midday temperatures in June can reach 30 degrees Celsius, evenings and mornings are dew-point cool – even chilly for those unaccustomed to northern climates. Temperature variations can be in the double digits over a 24-hour period.

On 13 June, after a light breakfast of coffee, pastry, cheese and fruit, APSA delegates boarded a bus and ventured towards the commune of Les Bois-d'Anjou. There we visited GEVES' Brion Testing Station. GEVES is the *Groupe d'Etude et de Contrôle des Variétés et des Semences*, that is, the Variety and Seed Study and Control Group, which oversees testing and registration of new varieties.

Before taking to the field, the group sat through informative presentations to learn about GEVES' activities and functions. Christian Leclerc, the General Secretary of CTPS, GEVES' Technical Committee for Plant Breeding, ran through all the fundamentals of registering



The APSA group visited several factories, including that of Astera Seed in Lasserre-de-Prouille.

varieties in France and Europe, including the protocol and procedures for common variety tests (DUS, VCUS, etc.) and getting listed in the French and European seed catalogues.

Next, Yvane Meresse of INOV (*Instance Nationale des Obtentions Végétales*), the French National Plant Variety Authority under GEVES, gave a comprehensive overview of Plant Breeders Rights (PBR) in France and Europe, covering legislation, filing criteria, procedures and exceptions. The farmers and breeders' exceptions for using PVP-protected varieties were of particular interest to the group.

Stephanie Christien, Manager of DUS studies at GEVES, led a tour of variety trial plots. Beans were in harvest, but the group also got to see various other vegetable, fruit and flower varieties under trial and observation.

After a lunch of salad, fish, steak, chocolate mousse and strawberries at a local restaurant near Brion, the group continued to the Vilmorin-MKS headquarters in La Ménitère, a riverside town on the north bank of France's longest river, the life-giving Rives de Loire, which snakes through the Loire-Anjou-Touraine Natural Regional Park.

The oldest seed company in the country, with nearly three centuries of history, Vilmorin-MKS was a generous host, holding almost nothing back in showing APSA nearly every stage in the company's production and processing of seeds.

After a very comprehensive tour – which covered sorting, cleaning, testing, storing,

pelleting, germination and R&D – all were eager for drinks and dinner. Hosted by Vilmorin-MTK's CEO, Rudolphe Millet, a memorable evening of fine dining and discussion was enjoyed at the manor-like "gastronomique" restaurant attached to the *Loire & Sens au Fief de la Thioire*.

On the morning of 14 June, the group was joined by Florian Samson-Kermarrec, UFS Deputy Manager, for one final stop in the verdant seed-producing area of the Loire-Anjou-Touraine – about halfway between Angers and Saumur – at the headquarters of Terrena Seeds, near the town of Beaufort-en-Vallée. After a presentation and factory tour led by Vegetable Seed Production Manager David Antier and Managing Director Xavier Carrion, the group journeyed an hour northeast to the scenic countryside of Lutz en Dunois, just to the east of Châteaudun, where they were welcomed by Frédéric Peters and Jean Baptiste Guicoc of Frasem Seeds, as well as Christophe Guitton of Alliance Seeds.

Awaiting the group was a hearty lunch spread prepared by the family of M. Peters, Frasem's GM. Particular compliments go to the mouthwatering grilled duck. Medium-rare, the bird could have passed as a steak. After a presentation about Frasem, M. Peters and M. Guicoc led the group on a field tour, the highlights of which included carrot, onion, cabbage and hybrid spinach. The visit ended with a tour of Frasem's seed cleaning and sorting factory before the group boarded the bus back to Paris for a short night's sleep before an early morning flight the following day.

On 15 June, the group flew to the aviation hub of Toulouse in the southwest of France, where they continued by van to Astera Seed's factory in Lasserre-de-Prouille. The company's president, Daniel Pujol, explained that the area is strategically located halfway between the Atlantic Ocean and Mediterranean Sea, which offers the perfect conditions for not only seed production, but also wine – not too humid, arid, windy, cool or warm, but just right. After a brief tour of the factory and the cabbage, onion and carrot production field sites, it was time for lunch at the Domaine Gayda, a premium restaurant that bottles its own wine on site.

The day concluded with a few hours' drive east to yet another historical southern France gem, Avignon. There, the group was greeted by Samuel Dousse (Breeding Director, EMEA of HM Clause), who hosted dinner in the town square before leading some of the group on a walking tour of Avignon. As gargoyles overlooked the ancient city streets, soothing vibes from buskers' accordions and guitars mesmerised the group, many of whom vowed to return for leisure.

M. Dousse met the group bright and early, joining them at his company's research station nearby in Saint-Rémy-de-Provence. There, privy presentations were delivered by Research Station Manager Christophe Bocel, along with M. Dousse, who then led the group on a tour of the centre's fully-automated and environmentally controlled green houses. Though photos of specific trials were restricted, the curiosity of members about the breeding and trial processes and timelines was not.

Richard Brand of GEVES then took the group to a few vegetable variety production sites before breaking for lunch. The final stop in the South of France was in Montfavet, at the office of INRA (*Institut National de la Recherche Agronomique*), the French National Institute for Agricultural Research, which featured a presentation by Marie-Christine Daunay covering the various research programmes of INRA. Mme. Daunay's passion for eggplant breeding research and the promising use of rootstock in disease resistance breeding was contagious.

Remy Cailliatte briefly presented a talk on INRA's BAP (*Biologie et Amélioration des Plantes*), the Plant Biology and Breeding Division. Though short on time owing to a tight train schedule, the APSA group was particularly thankful for the many research, literature and breakthrough leads Mme. Daunay, M. Brand and M. Cailliatte readily provided.

After a speedy-yet-relaxing cross-country train commute, the group was welcomed back in Paris by Mme. Beng-Thi and her colleague, Maiwenn Laplane, who, on behalf of GNIS, hosted a warm French feast of fish, steaks, uplifting drinks and sweets. Some of the group then bid farewell, while others stayed on for sightseeing and to join another farewell dinner on 17 June over a flavourful Indian and Pakistani spread at the restaurant Kayani in the heart of Boulogne-Billancourt. This too was brilliant, and no less satisfying than France's far-famed cuisine to APSA's Asian spicy-food lovers. 🌶️



Richard Brand shows delegates one of the tomato varieties GEVES is studying.

Vegetable Seed Trade Trends: 2015

Top Importers				
	Country	Tonnes	million US\$	\$/tonne
1	Netherlands	13,590	420	30,905.08
2	United States	14,190	381	26,849.89
3	Mexico	1353	295	218,034.00
4	Spain	2965	214	72,175.38
5	Italy	6866	180	26,216.14
6	China	9300	172	18,494.62
7	France	4050	143	35,308.64
8	Japan	4775	125	26,178.01
9	Turkey	771	105	136,186.77
10	Canada	3751	97	25,859.77
11	S Korea	2508	76	30,303.03
12	Germany	2934	74	25,221.54
13	India	3385	73	21,565.73
14	UK	13668	73	5,340.94
15	Brazil	732	72	98,360.66
16	Russia	981	57	58,103.98
17	Morocco	730	49	67,123.29
18	Poland	624	46	73,717.95
19	Australia	2,170	45	20,737.33
20	China (Hong Kong)	1,755	39	22,222.22
21	Pakistan	3035	33	10,873.15
Top Exporters				
	Country	Tonnes	million US\$	\$/tonne
1	Netherlands	12,364	1,221	98,754.45
2	United States	15,007	624	41,580.60
3	France	9,454	409	43,262.11
4	China	5,360	161	30,037.31
5	Chile	1,415	134	94,699.65
6	Israel	Unavailable	131	Unavailable
7	Italy	12,390	111	8,958.84
8	Japan	1,020	95	93,137.25
9	Thailand	2,500	94	37,600.00
10	Germany	1,715	70	40,816.33
11	Spain	2,445	56	22,903.89
12	Denmark	10,700	56	5,233.64
13	New Zealand	8,885	49	5,514.91
14	S Korea	520	46	88,461.54
15	India	3,130	41	13,099.04
16	China (Hong Kong)	1,842	41	22,258.41
17	Peru	351	27	76,923.08
18	South Africa	1,463	25	17,088.17
19	United Kingdom	887	23	25,930.10
20	Australia	1,888	22	11,652.54
21	Argentina	385	19	49,350.65
Seed Sustainability				
	Country	Trade Balance (US\$ Million)		
1	Netherlands	801.00		
2	France	266.00		
3	United States	243.00		
4	Chile	110.00		
5	Israel	109.00		
6	Thailand	73.00		
7	Denmark	34.00		
8	New Zealand	34.00		
9	Peru	14.00		
10	China (Hong Kong)	2.00		
11	South Africa	0.00		
12	Germany	-4.00		
13	Argentina	-5		
14	China	-11.00		
15	Australia	-23		
16	Japan	-30.00		
17	S Korea	-30.00		
18	India	-32.00		
19	United Kingdom	-50.00		
20	Italy	-69.00		
21	Spain	-158.00		

Data sourced from ISF, compiled, analysed and ordered by Asian Seed. Only seed exports with a value greater than USD 1 million have been reported. Vegetable crop seed includes seeds of all vegetable crops. Potato seed and mushrooms are not included. The data may not be definitive or reflective of the trade of non-certified seeds and should only be used for general reference purposes. For the full, original table, see worldseed.org/resources/seed-statistics/

France's Love Affair with Ecology



When it comes to environmental protection, the French nation is among the most passionate in the world. Their reputation for advocating protection and preservation of what they call, with characteristic precision, 'l'écologie' – the branch of biology dealing with interrelationships among living organisms – is longstanding.

Even before landing at Paris Charles de Gaulle Airport, you'll be impressed, and perhaps not a little influenced, by what you see from the air: an endless vista of verdant fields, pastures and, yes, vineyards. Even from your seat you'll realise great things are to come during your journey in France.

Greenery is hardly diminished in the metropolis, despite a population approaching 11 million. Parks and gardens are planted in abundance: 421 cover some 3,000 hectares and are shaded by no fewer than 250,000 trees, with city streets lined with the latter. There is even a vineyard, the Clos Montmartre. Through it all, as it has since time immemorial, winds the river Seine, which is what keeps all those plants so green.

The city is better known, of course, for its architecture and artwork, thereby attracting some 18 million international visitors in the last year. Most were lured by longing to see the Eiffel Tower, the Arc de Triomphe, Notre Dame Cathedral and the Louvre with their own eyes rather than those of a photographer. Others only cared for shopping or fine dining.

Yet, strange as it seems, the city's ecological wonders trump its historic museums and iconic edifices, at least in the eyes of Asian Seed. What a place to take pictures for those with an eye for botany!



France is a haven for ecology, biodiversity, history, modern technology, agriculture and seed. Photos: Steven Layne

Pick a park, any park. There, in these urban sanctuaries come June, you will find Parisians (and scores of other living organisms) sunning themselves amid the scent of cherry blossoms, lilies, daffodils, irises, and roses; bees humming all the while.

France's healthy biodiversity can be consumed in even higher doses outside the capital, as every town and city seems to have enough lively gardens and botanical masterpieces

to keep nervous shutter-fingers occupied for hours. Rural France remains unsullied by the eyesores of modern consumer capitalism.

In agricultural zones, the French system of "crop insulation" ensures too much or too little of any crop is never cultivated in one place at one time. That contributes both to market stability and biodiversity. What is grown is based on logic and thrives owing to thoughtful administration.

Then there are the '*parcs naturel regional*' which cover 15 percent of France. You're never far from one of these Natural Regional Parks as they number 49 and are found throughout the country. They are extraordinarily beautiful – inhabited, yet strictly protected – and are all about historically conscious, sustainably developed communities. 🌱



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Where Quality Food Begins.

Viva La France

Here, hosts and participants share their impressions of the tour and on what aspects of French seed production they thought were most advantageous.



We were impressed with most aspects of the tour. The system between the Government, private companies and the farmers is very well integrated. In Indonesia, the link between government and farmers is not yet systemised. For now, we are not a breeding company, but if we do develop into a breeding company, we will be very interested indeed in doing seed business with French companies, but we would also like to visit the Netherlands for further study and observation.

Candara Setiawan Lily (Director) and Ika Titiani Nugroho (Vice Director) at PT. TANI MURNI INDONESIA

The group was very interested in their visit and had a lot of questions. It was sometimes difficult for me to answer all of their questions coming from so many angles! Interests varied among the group and future contact looks promising. Some were interested in cabbage seed production, others were interested in carrot seed. Most of them were very impressed by our 'tunnel' seed production, especially the manually-pollinated crops and the high prices we are practicing. Many Japanese and Korean seed companies have chosen France over other Asian countries for seed production for many years. France can be a very suitable supplier to Asian buyers. Seed purity is one of our major advantages and this is due to very strict organisation. As the group saw during their visit, irrigation is not a limiting factor. This topic can become a major aspect of seed multiplication in the near future.

Daniel Pujol, President of ASTERA SEED

We need strong associations like GNIS to achieve final targets, i.e., quality seed supply with good time management. Such associations bring all seed people closer to understanding each other and it is useful in providing a platform to express their problems and requirements. For me, seed production of cabbage, onion, cauliflower and carrot is the most preferable aspect of the seed sector in France, where there is vast knowledge about quality seed production and the required facilities, machinery and weather conditions. Moreover, the co-operation among farmers and producers is excellent.



Chandrasekhara Devegowda, Asst Manager at NONGWOO SEED INDIA PVT., LTD.

It was a really well-managed tour over a short span of time. It's a great occasion to meet professionals, to share their experiences and to learn. France is the leading seed producing country for the following reasons: 1. Focused approach, 2. Mechanisation, 3. Strong research base, 4. Registration process of the hybrids, and 5. Advanced processing equipment. We are interested in doing business with French seed companies, especially in R&D collaboration.



Lakshmi Narasimha, (MD) and Gopalakrishna Hedge (Director of Research) at NOBLE SEEDS PVT., LTD.



In sum, the tour organisation was wonderful, with a small and flexible group, clear learning objectives and very high efficiency. Such activities will benefit the worldwide seed industry. In France, the sound legal system in intellectual property protection and quality supervision and control greatly enhances the healthy and orderly development of the seed industry. GEVES, GNIS, INOV and INRA all play important roles in the system. In addition, France has a wonderful climate for seed production. The industry is highly developed with advanced technologies and high-standard seed processing abilities. We are willing to learn more about the professional companies in vegetable seed production and to start business with them.

Gao Xiuying (Vice GM) and Zhang Qianjie (President and R&D Director) at BEIJING JEWELRY SEEDS CO., LTD.

People were involved in discussions and field visits, both important points for a seed production company. They were professional, had good technical knowledge and were curious about how crops are managed. They were also impressed with the machines used at Frasem for reducing labour costs and ensuring seed quality.



Frédéric Peters, GM at FRASEM SEEDS



In all, it was a properly planned and managed tour in which we got the chance to meet all stakeholders of the business, including regulatory authorities, associations, seed companies, production companies and representatives of the scientific community. I am thankful to the APSA team (Dr. Dadlani, Steven and Xiaofeng) for taking good care of us and the sleek execution of the programme. We appreciate and thank all of our hosts for the hospitality and time they gave to us, all were very open in dialogue and in information sharing. Some positive aspects of the French seed sector are the grower-company association, crystal clear contracts, grievance mechanisms and the strength of their seed associations. I see many possibilities for seed production and we are looking forward to possible association/exchanges of information in future.

Atul Sah, Business Head at VNR SEEDS

I feel really positive about the interest of the group in our activities. The quality of questions showed the high level of understanding, knowledge and integration of the APSA group in the seed industry, even if they were far from their countries. We are really talking the same language when we talk about our businesses. This was about infrastructure, plant behaviour, ways of working and resources. One key advantage in France is the sustainable farmer network that supports production. This is based,



of course, on organisation, regulation, control and certification structure. An important challenge is linking seed movement and regulations. Sanitary seed status is a recurrent and key challenge as well.

Samuel Dousse, Breeding Director (EMEA) at HM CLAUSE

I would like to thank APSA, hosts and organisers for such an informative tour. All, the companies and organisations we visited were very generous and patiently answered all of our questions and other information that we sought from them. One thing of specific note, and which should be implemented in our country, was seeing how all the business organisations, whether large or small, were so well integrated with each other, as well as with organisations like UFS, GEVES and GNIS. They work collectively and for a common interest. During this tour, I developed a lot of new contacts and I am going to follow up with them and definitely explore new business opportunities for the future.



Rahul Pahuja, Product Development Manager at GLOBAL SEEDS

For all full, unabridged comments, see [Study Tours](https://apsaseed.org/members-programs/) at apsaseed.org/members-programs/

Underlining Plant Protection Priorities through Phytosanitary Measures

On 29 and 30 June, National Plant Protection Officers (NPPOs) from Australia, Bangladesh, Cambodia, Japan, Nepal, New Zealand, Pakistan, the Philippines and Thailand joined private and public sector phytosanitary experts and national seed association representatives from three continents – Asia, Europe and North America – for APSA's Third Phytosanitary Expert Consultation.

Held with the aim of improving “*Phytosanitary Collaboration in the Asia-Pacific Region*”, the latest in the ongoing series of meetings took place at the Shangri-La Hotel, Bangkok, and was possible thanks to support from CropLife Asia (CLA), the American Seed Trade Association (ASTA) and Winrock International.

Presiding over the meeting were APSA's Executive Director, Heidi Gallant; Technical Director Dr. Narendra Dadlani; Treasurer Jack Metzelaar; and Standing Committee on Trade & Marketing Chairman, Mr. Niranjana K. Kollipara.

They were joined by representatives from APSA's Phytosanitary Committee, led by Robert M. Keene (Enza Zaden), Michael

Leader (Monsanto), Thelma Soriano (CLA) and Rajvir Singh Rath (Bayer).

Opening remarks from Mr. Kollipara, Dr. Dadlani and Mr. Metzelaar effectively set a serious yet progressive tone for the meeting. Mr. Kollipara emphasised that in

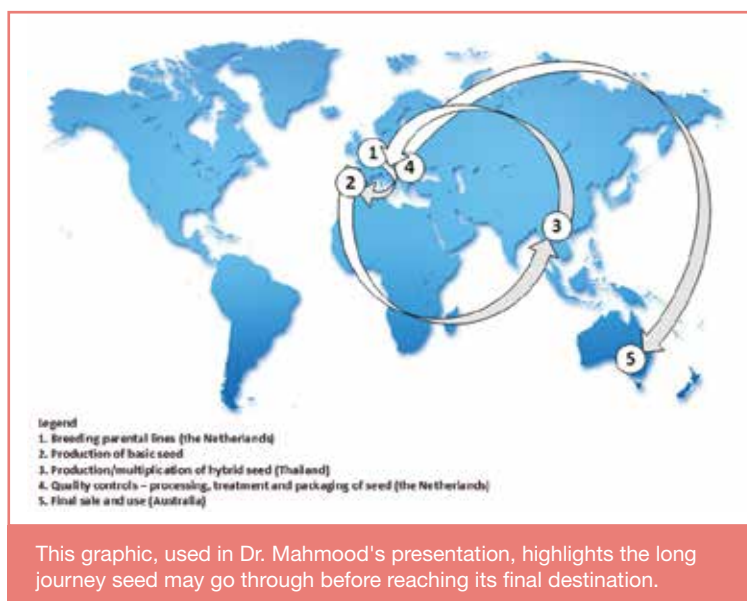
Dr. Dadlani then reviewed outcomes of the 2nd Phytosanitary Expert Consultation (held in Bangkok, 5-6 September 2016), highlighting the importance of the industry and NPPOs working as “one family”.

Finally, Mr. Metzelaar emphasised the importance that APSA's Executive Committee devotes to Phytosanitary Expert Consultations, complementing Mr. Kollipara's earlier remarks. “APSA is the largest regional seed association in the world, and the free movement of seed is extremely important for our members, but we also need to ensure safe transit of the seeds through all different borders,” he concluded, before opening the floor for presentations.

The first presentation, “Phyto-Harmonisation Examples of Collaboration Between Industry & Government Regulatory Authorities”, was given by Dr. Nasir Mahmood, the

director of Grains, Seeds & Weeds (Plant Biosecurity) of the Australian Government's Ministry of Agriculture.

Regarding seed management systems and regulations in Australia, Dr. Mahmood



working together to mitigate an increasing number of biosecurity threats suspected of being linked to the movement of seed, all stakeholders need to ensure that phytosanitary measures do not become trade barriers to the seed industry.

introduced his country's Biosecurity Import Conditions database, or BICON, highlighting collaboration efforts between industry and the Government, both domestically and internationally.

Dr. Mahmood assured the meeting that the Australian Government has no intention of disturbing trade, but at the same time, must be careful not to compromise biosecurity. Post-presentation discussions centred on the harmonisation of available pest lists, which include ISF's regulated pest list, in addition to the Crop Protection Compendium of CABI. There was agreement that CABI's list is a good starting point for NPPOs, while feedback to update the pest list was welcomed.

In the case of Australia, the country is developing its own commodity-specific list in compliance with ISPM standards agreed to by members of the International Plant Protection Convention (IPPC) of FAO.

Dr. Rose Souza Richards, Senior Advisor at the Ministry of Primary Industries, in her presentation, "New Zealand Case of Collaboration Between Industry and NPPO", highlighted emergency measures, collaborations, public consultations and transparency in her country's threat management of the cropping weed *Abutilon theophrasti* (velvet leaf). Dr. Souza Richards explained New Zealand's Government Industry Agreement (GIA) approach for managing biosecurity threats.

A single agreement integrating various industries, the GIA is being devised with input and funding from both public and private stakeholders and seed



The meeting served as a forum for public and private stakeholders to exchange experiences, ideas, challenges and solutions in respect to phytosanitary measures specific to seed.

industry implementation is planned for the near future.

Next, Joselito L. Antioquia, Supervising Agriculturist of the Bureau of Plant Industry (the Philippines), gave a talk on the "Philippine Plant Quarantine System – Policies on Seed Movement", covering general phytosanitary measures of imported and exported crop seeds, as well as special arrangements for handling restricted and destructive plant seeds.

Speaking on "Phytosanitary-Harmonisation Efforts in North America" on behalf of ASTA, Tom Moore of HM Clause gave an overview of current ASTA phytosanitary

specific projects, namely the National Seed Health Accreditation Pilot Project (NSHAPP), the Regulatory Framework for Seed Health (Re-FreSH) and the evaluation of seed quality management practices to reduce phytosanitary risks (The Gottwald Research Project), before concluding his presentation by highlighting efforts to harmonise seed testing methods between US and Mexican NPPOs in detecting the Pepper Mild Mottle Virus (PMMoV) in peppers.

Francois Burgaud, Director of International Relations (GNIS France), spoke on "French Implementation of European Phytosanitary Regulations – with Involvement from the Private Sector". Highlights included an explanation



Dr. Nasir Mahmood, Director of Grains, Seeds & Weeds of the Australian NPPO, greets APSA's Technical Director, Dr. Narendra Dadlani.

of the procedures related to the Official Department for Seed Control and Certification (SOC), the certification authority in charge of seed and plant certification in France, as well as for EU and OECD certification schemes. The SOC is in charge of issuing the EU phyto-passport, which is similar to the Americans' Re-FreSH scheme, essentially replacing individual phytosanitary certificates.

Mr. Burgaud also talked about the EU's new Plant Health Regulation, which will come into effect by 2019. While addressing common concerns about the mismatch of certification requirements for seeds that move through multiple countries before reaching their destinations, Mr. Burgaud reassured the meeting that the EU plant passport addresses these concerns and raised the possibility of the system being implemented sooner than 2019, a prospect which he promised to discuss with concerned parties in the EU.

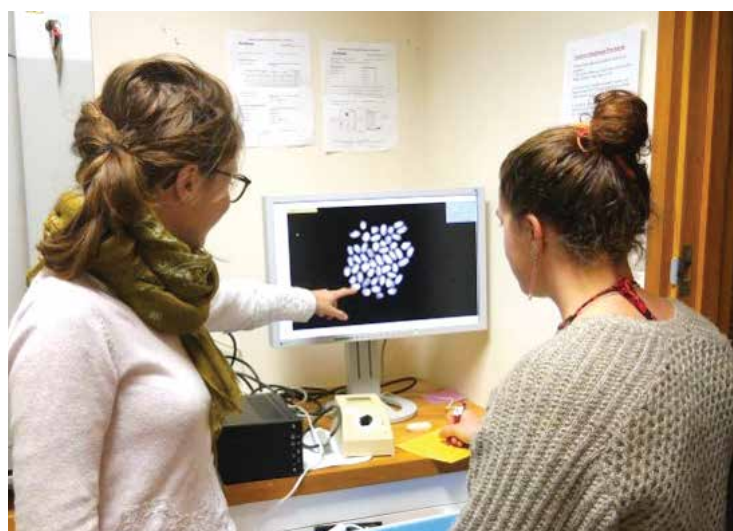
Presenting details on the "Proposal for Developing APPPC Regional Standards for Phytosanitary Measures (RSPMs) on Seed Health Certification", Ms. Tasanee Pradyabumrung, Senior Expert at the National Bureau of Agricultural Commodity and Food Standards (ACFS) in Thailand, talked about the Asia and Pacific Plant Protection Commission (APPPC) activities, presenting an APPPC proposal to ensure that regional standards for phytosanitary measures comply with the recently approved ISPM 38: ISPM for the International Movement of Seeds. A workplan covering these seed-specific measures will be discussed further at the 30th APPPC Session, scheduled for New Zealand this November.

The final presentation, "ISPM Update & Next Steps", was given by Dennis Johnson, Seed Health Manager at ISF. The focus of the presentation was on updates to ISPM 38 in relation to Pest Risk Analysis (PRA), advising the meeting on implementing a

systems approach towards phytosanitary management, seed testing, re-exports and outreach. The ISPM 38 training manual is available via the ISF website. Mr. Johnson brought his presentation home by emphasising that in many documented cases, seed is not a proven pathway for the spread of phytosanitary biosecurity threats.

This was a central point of discussion throughout the meeting, which continued on 30 June with a "Round Table on Framework to Facilitate Government & Industry Collaboration", moderated by Robert M. Keene, director of International Affairs at Enza Zaden, the Netherlands.

Discussions were productive, progressive and yielded solid commitments from all stakeholders. The final, official report from the meeting is currently under review and will be available in the near future for participants and members on the APSA website. 🌱



Public-Private collaboration is key to mitigating biosecurity threats.



Rob Keene of Enza Zaden and Dr. Rose Souza Richards.

Assay Type	Presence of pathogen given	Pathogenicity confirmed	Direct or Indirect Method
Grow-Out	Yes	Yes	Direct
Bio-assay	Yes	Yes	Direct
Blotter/Microscopy	Yes	Yes (via bioassay)	Direct
	Yes	No	Indirect
Dilution Plating	Yes	Yes (via bioassay)	Direct
	Yes	No	Indirect
Bio-PCR	Yes	No	Indirect
ELISA	Yes	No	Indirect
Seed or Seed Extract PCR	Yes	No	Indirect

The ISF pest list table, presented during the meeting, highlights instances where seed was not a proven pathway for the spread of pathogens.



PHYTO-PERFECT, PHYTO-GENIC (From top left, going clockwise): Participants pose for a group photo; Fakhar Zaman, NPPO of Pakistan speaks as Francois Burgaud looks on; Michael Leader of Monsanto and Dennis Johnson of IFS; Cambodian NPPO, Chhunhy Heng with Sarah Smiley of Winrock International and Thelma Soriano of CropLife Asia; Tom Moore of HM Clause and ASTA; and Tuan Anh Nguyen, NPPO of Vietnam and Dr. Dilli Ram Sharma, NPPO of Nepal.

Following the consultation, *Asian Seed* reached out to meeting participants, asking them about their impressions from the meeting and specifically about the challenges and opportunities they perceive moving forward. Here's a collection of quotes which have been edited for clarity and conciseness.



Our impression of the consultation is absolutely positive. We recognise the value of improving standards at the national level and, in moving forward, it is important that the harmonisation of standards be realised at the regional and global levels. In Bangladesh, we are in the process of drafting new plant quarantine rules, which will be ready for deployment soon. We are also trying to implement some of the points of ISPM 38 and plan to make our plant quarantine act, policy, rules and PRA available online. In respect to biosecurity, ISPMs and PRAs, some areas we feel need careful consideration for revision include biosecurity, safe food production, seed health, pests and pathogens, pest surveillance, and forecasting systems.

Manik Chandra Karmoker (Assistant Seed Technologist, Seed Wing, Ministry of Agriculture, Bangladesh) and Abdul Quader (Deputy Director of Plant Quarantine Station, Dept. of Agriculture Extension, Bangladesh)



Seed trade is a priority area and we are honoured to be partnering with APSA to support and complement their efforts to advocate for quality, safe seed reaching farmers in a timely manner. Given the global nature of the seed trade, this Third Phytosanitary Expert Consultation provided a valuable and much needed forum to facilitate and contribute to the harmonisation of regulatory procedures for seed and seed related issues toward internationally accepted standards across the region. Winrock International is working with the United States Agency for International Development (USAID) to implement the USAID Feed The Future Asia Innovative Farmers Project.

**Sarah Smiley
Regional Policy Manager
Winrock International
Event Sponsors**

My impression of the APSA Third Expert Consultation was that it was positive and progressive. I saw there were two areas where progress was made. First, making the NPPOs more aware of the new ISPM 38 on seed, and second, that all NPPOs were open to express their opinions about each question that was presented. More training is needed for both the implementation of ISPM 38 and PRAs, as most countries have conducted PRAs but not specifically for seed. I still see challenges in some countries due to a lack of resources. This will limit their ability to move forward in some areas of the ISPM 38. I think we have made progress in overcoming the lack of dialogue between NPPOs and industry.

**Tom Moore
West Coast Production Manager
HM Clause, ASTA**



I learned a lot and gained information on relevant and acceptable phytosanitary measures, on identifying training needs relative to safe trade, implementing ISPM 38, developing a priority pest list focused on crops of economic importance, and on addressing PRA concerns in the region. Specifically, I really wanted to know more about, and how to apply to, Australia's system of Permitted, Restricted and Prohibited Seeds, as well as Seeds for Further Assessment, based on its BICON database. I was delighted to find out that this information is in fact available in the public domain, hence, I will be informing my PRA section to start exploring the database.

**Joselito L. Antioquia,
Assistant Division Chief and Supervising Agriculturist
Dept. of Agriculture, Bureau of Plant Industry, National Plant Quarantine Services Division, the Philippines**



The consultation was successful such that every NPPO and all the participants were very open in sharing their experiences with phytosanitary issues and activities. The participants agreed to have continuous consultations and activities to further discuss the previously emphasised issues, such as those with PRAs or having a common data pest list, as well as common detection methods and issues stipulated in the ISPM 38 to address technical barriers to trade and to establish clear targets for the harmonisation of phytosanitary standards. I think more information sharing, or the continuous exchange of information on phytosanitary issues, is one of the key elements for having successful collaborations and is critical for improved safe seed movement.

**Thelma Soriano
Seed Regulatory Affairs Director
CropLife Asia**





The meeting was very fruitful. All discussions and presentations were very informative, especially in respect to the development of protocols on Sanitary and Phytosanitary (SPS) measures. PRA is very important for market access. And when it comes to developing pest lists, PRAs need to be prioritised to meet our specific conditions. NPPO Nepal would like to emphasise the use of ISPMs, where

there should be minimal requirements, provided guidance and recommendations that are applicable to the seed trade. For example, on inspection methodology, pest risk analysis and risk management, recognition of pest-free areas, and phytosanitary certification. Trade partners should study the provisions of the ISPMs and apply them where appropriate in order to avoid unnecessary trade conflicts. Every country should respect and comply with exporting/importing countries' phytosanitary rules and regulations to ensure the success and safety of seed trade.

Dilli Ram Sharma, Ph.D.
Programme Director/National Coordinator of
National IPM Programme Plant Protection Directorate
Ministry of Agricultural Development, Nepal, Head NPPO



The consultation was very informative, though more efforts can be made with regards to existing platforms. The information provided about business problems and regulation updates in regions outside of Asia was very useful, which could even be a core standing agenda for similar meetings in future. It's good to have occasional discussions, particularly in this case as the ISPM for seed movement was adopted recently and new considerations have to be taken into account. At the same time, it is our strong belief that collaboration efforts should initially be made among industries and among NPPOs at the regional level, as well as between industries and NPPOs at the national level. Additionally, a fundamental understanding of the existing phytosanitary regulative framework is essential. If these efforts are insufficient, only limited outcomes can be obtained through regional discussions, or less effective discussions would take place, with industries and NPPOs present together.

Yukio Yokoi (Director of the Research Division, Yokohama Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries) and Natsumi Yamada (International Affairs Office, Plant Protection Division, Food Safety and Consumer Affairs Bureau, MAFF)



I participated in the first APSA phytosanitary workshop three years ago and am very pleased to see the progress made and the impressive level of communication and understanding between all participants. I gained much more insight into the specific approaches to phytosanitary seed matters of each NPPO and their views on the implementation of the ISPM 38. I will take these back with me to the ISF to help tune our learning modules. We will concentrate on shifting the NPPOs' focus on the existing ISPMs to that of the new ISPM 38 on seed. We have to work on a PRA database system of some sort. The stage has been set for excellent cooperation on ensuring the smooth movement of clean seed around the region, I look forward to providing my support.

Robert M. Keene
Director of International Affairs
Enza Zaden, the Netherlands & ISF

It was a good meeting where everyone opened up and discussed the issues we are facing. It is important that we harmonise phytosanitary requirements throughout our region. At the same time, I think it is just as important to harmonise the import requirements of each country within the region so that we know what we will face.

Dr. Anthony Tse
Past President of APSA
Clover Seed Company, Hong Kong



These type of consultations and exchanges between NPPOs and seed industry stakeholders are very efficient. It's easier to solve phytosanitary problems when we know each other. I discovered that the level of knowledge and capacity building is very different regarding these issues. Again, to know some heads of phytosanitary services is very important for us. For the future, I think we may come back on PRAs, which clearly will be used more and more. We may also encourage NPPOs to involve their private sector in the phytosanitary control of their territory.

Francois Burgaud
Director of International Relations
GNIS France



To better gauge perceptions of phytosanitary measures in Asia, APSA has created a questionnaire asking members about their views and experiences importing and exporting seed to and from Asia. Specifically, we'd like to know how members in our region perceive the phytosanitary procedures in their main operating countries, especially in respect to the handling of pest lists and PRAs. Tell us about your experiences now by scanning the QR Code.



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Update: Thailand Seed Retail Shelf Life Recommendations

The Executive Committee of the Thai Seed Trade Association (ThaSTA) has revised its seed shelf life recommendations for retail labels covering 34 types of vegetable and field crop seeds.

Initially announced by ThaSTA in November last year, the below table denotes maximum retail shelf life recommendations, in months, for both hybrid and OP varieties of popular crop seeds sold throughout

Vegetable	Crop Seed	Hybrid	OP
Green okra – กระเจี๊ยบเขียว	24	24	12
Garlic (leaf) – กระเทียมใบ			6
Cabbage, Cauliflower, Chinese kale, Broccoli – กะหล่ำปลี, กะหล่ำดอก, คะน้า, บรอกโคลี	18	18	18
Paddy – ข้าวเปลือก	24	24	24
Corn feed – ข้าวโพดอาหารสัตว์	18	18	18
Waxy corn – ข้าวโพดข้าวเหนียว	18	18	12
Baby corn – ข้าวโพดฝักอ่อน	18	18	
Sweet corn – ข้าวโพดหวาน	6	6	6
Sorghum – ข้าวฟ่าง	18	18	
Cantaloupe, Muskmelon, Melon – แคนตาลูป, แตงเทศ, เมล่อน	18	18	
Cucumber – แตงกวา, แตงร้าน	24	24	18
Watermelon – แตงโม	24	24	12
Yardlong bean – ถัวยาว			18
Pea – ถั่วลิสงเตา			12
Mung bean – ถั่วเขียว			12
Black gram – ถั่วเขียวผัสดำ			12
Soya – ถั่วเหลือง			6
Sunflower – ถั่วตะวัน	12	12	
Luffa/ ridge gourd – บวบเหลี่ยม	24	24	12
Bok choy, Napa cabbage – ผักกาดกวางตุ้ง, ผักกาดขาว	18	18	18
Mustard greens – ผักกาดเขียว	18	18	18
Lettuce – ผักกาดหอม			12
Chinese radish – ผักกาดหัว	18	18	18
Coriander – ผักชี			12
Water spinach – ผักบุ้ง			18
Chilli – พริก	24	24	12
Sweet pepper – พริกหวาน	18	18	
Pumpkin – ฟักทอง	24	24	12
Wax gourd – ฟัก, แฟง	24	24	12
Bitter melon – มะระจีน, มะระจีน	18	18	18
Eggplant, Thai eggplant – มะเขือยาว, มะเขือม่วง, มะเขือเปราะ	24	24	12
Tomato – มะเขือเทศ	24	24	18
Onion – หอมหัวใหญ่	12	12	
Papaya – มะละกอ	12	12	12

Thailand. The recommendations – based on standard ambient conditions for seed retail space (storefronts) in Thailand, which assume a temperature of around 30 degrees Celsius, shade (from sun, rain and other weather elements) and moisture-proof packaging – are to be counted from the date of seed testing.

The revised recommendations were presented in a document signed 25 May by ThaSTA President Dr. Chairerg Sagwansupyakorn following the latest meetings between testing officials and seed enterprise representatives who are working together to standardise the quality of retail seeds in the Kingdom.

According to ThaSTA, the only change in the revised edition involved the recommendation for hybrid watermelon seeds, which was extended from 12 months to 24 months. The recommendation for OP watermelon seed varieties is still 12 months.

In a message to its members sharing the revised document, ThaSTA said the recommendations will be presented to the Department of Agriculture (DoA), the Thai authority responsible for enforcing seed testing as mandated by Thailand's Plant Act.

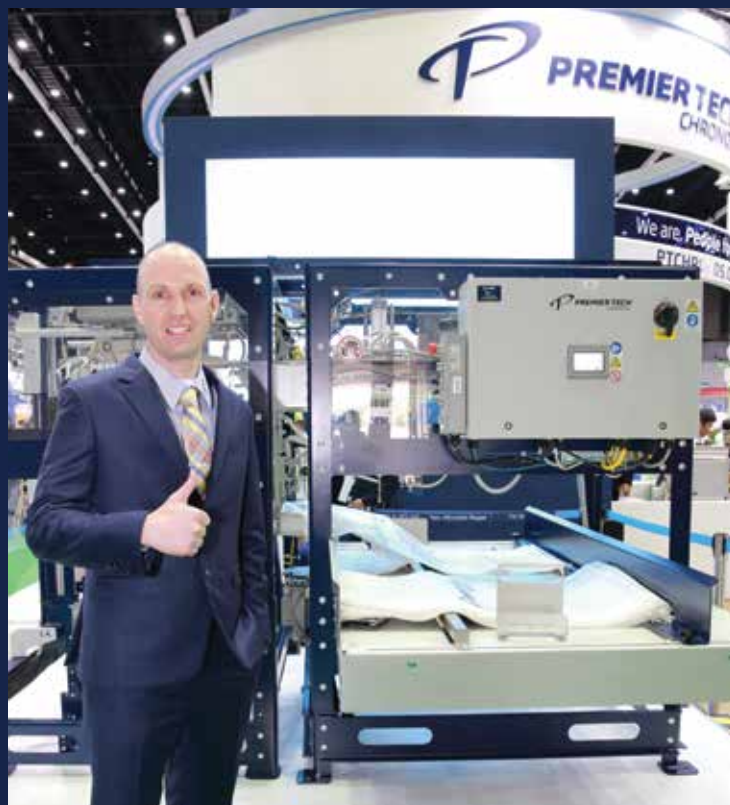
The most common seed tests in Thailand include screening for pests (PRA), chemical residuals (MRL), vitality and germination rates.

According to the Plant Act, retail vegetable and crop seed must have germination rates of no less than 80%, while packaging must display the expiration date of the seeds.

However, according to ThaSTA, some seed producers, distributors and retailers have come under scrutiny in recent months by the DoA for their seeds' failure to meet the germination standards.

Failure to comply with the requirements may result in criminal prosecution in Thailand, where high production and retail standards are being pushed as part of efforts to develop the country into an international "Seed Hub". 🌱

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To learn more about Premier Tech Chronos, please visit ptchronos.com or email [Kamonned Kchputi \(kchk@premiertech.com\)](mailto:Kamonned Kchputi (kchk@premiertech.com))

The Seed of Fish & Aquaculture Opportunities

Most of the seed we cover in this publication deals with plants. However, seed may also refer to the embryonic stages of other living organism types.



In aquaculture, seed refers to the four earliest stages of a fish's life. Namely, hatchling, spawn, fry and fingerling. While a hatchling is indeed born from an egg, it is considered fish seed until it matures into the juvenile stage.

Fascinated by everything seed, APSA Communications Officer Steven Layne, along with intern Jean Paul Hategekimana, joined a group of agronomists 8 June to visit a brackish water aquaculture research station just outside of Bangkok.

Organised by Kasetsart University and Winrock International, the field visit was the final stop of a three-day interdisciplinary tour that covered vegetable production as well as several fresh and brackish water aquaculture sites in Central and Western Thailand as part of the USAID Feed The Future Asia Innovative Farmers Activity (AIFA).

Represented by keen researchers and entrepreneurs from Bangladesh, Cambodia, Nepal and Thailand, the group earlier visited a private red tilapia farm in Tha Muang district of Kanchanaburi province, and a

black tilapia hatchery at Kasetsart University's Kamphaeng Saeng Campus in Nakhon Pathom province.

Situated in the coastal lowlands of Samut Songkhram province, about 60 km west of the Thai capital, the Kasetsart University Fisheries Research Station spans 11.8 hectares and is where fisheries officials and students conduct research on brackish water aquaculture.

Currently, the majority of research is focused on two types of aquatic species: seabass (*Lates calcarifer*) and whiteleg shrimp (*Litopenaeus vannamei*).

Commonly known as white sea bass, barramundi is a popular brackish water choice among local farmers since it can tolerate a wide range of conditions, including salt, brackish and fresh water habitats, explained Dr. Sukrit Nimitkul, Lecturer at KU's Department of Agriculture and AIFA Aquaculture Coordinator.

"The barramundi can live in a wide range of temperatures, but the optimal is 28 to 30 degrees Celsius. Therefore, Central Thailand has proven ideal for this species."

"The fish prefer still water to flowing, and though they can grow to more than 20 kg, the preferred market size is only about 7 kg, which is considered 'plate-sized' in Thailand."

Therefore, the typical harvesting cycle – from spawning to netting – is roughly six months, and the fish fetch about 130 baht per kilogram at local markets.

Dr. Sukrit explained that KU researchers are examining various wild and domesticated populations of the species throughout Thailand in order to determine ideal genetic factors for cultivation.

A second important aquatic species studied at the Samut Songkhram station is white shrimp, a species which aquaculturists are increasingly integrating into low-salinity freshwater polyculture operations.

Though white shrimp are conventionally cultivated in saltwater, local farmers were pleased to recently discover that they can also survive low-salinity habitats.

"We've found that white shrimp can survive in habitats with salinity levels as low as one to two parts per thousand," Dr. Sukrit said, noting that the ocean is typically at around 33-34 ppt.

A third species gaining in popularity is the *Oreochromis niloticus* or Nile tilapia, which can survive in salinity levels as high as 15 ppt. Hence, farmers have begun to cultivate tilapia together with whiteleg shrimp, with the saline "sweet spot" at around 5 ppt.

"Diseases that typically affect the whiteleg shrimp in high-salinity habitats aren't as prolific in low-salinity habitats," he continued, going on to highlight key economic opportunities with polyculture.



Dr. Sukrit Nimitkul

Since white shrimp are bottom feeders, feed expenses aren't necessarily increased proportionately in poly-culture operations, while income cycles and turnover are increased.

"The white shrimp can be harvested every three months, and the income from it alone is usually enough to cover a farmer's costs so that when it comes time to harvest tilapia, that turnover is all profit," he explained.

In addition to market opportunities, the AIFA group also discussed various challenges. These include high expenses for investment in, and maintenance of, components (aerators and circulators), as well as excavation equipment needed to develop and maintain canals and ponds.

Perhaps the biggest challenge in aquaculture today is sourcing high-quality feed. At present, commercial operations heavily depend on fish meal to meet high protein requirements.

Dr. Sukrit notes that high-protein feed, especially for carnivorous and omnivorous species like barramundi and tilapia, accounts for about 75% of a farmer's costs.

He points out that the fish meal model is not sustainable because it depends on declining and unstable

fish populations from the ocean. It is for this reason that rising feed costs are imminent.

"The feed companies and researchers are aware of this and are considering alternative, more sustainable solutions moving forward."

These include supplementing feed with plant proteins.

"While we can't eliminate animal proteins from fish feed for carnivorous species, we can supplement them with plant proteins and train these carnivorous fish to eat food pellets," he said.

Another promising feed solution being explored is the cultivation of insect larvae, including those of mosquitoes and flies, for example. However, for obvious reasons, explained Dr. Sukrit, care must be taken "in managing consumer perceptions about this type of food. There is a lot of promise in this field, but even if the feed is cultivated in clean and controlled conditions, many uninformed consumers will object to it based on their preconceived notions," he concluded.

Stay tuned for more articles like this exploring sustainable agricultural challenges and opportunities. Do you have any comments or suggestions? Email Steven@apsaseed.org 🐞



The International Family of Kasetsart University



On 15 June, APSA took part in the “KU-Hi-Trees: A get-together for International Organisations”, joining a handful of other international organisations that have offices or active programmes with Kasetsart University, including RECOFTC (the Center for People and Forest), the French Agriculture Development Research organisation CIRAD, Winrock International and the World Vegetable Center.

APSA – represented by Executive Director Heidi Gallant, Business Development Officer Suchada Yansarasin, Events Officer Mike Kingpayom and messenger Sundee Kumar – took the opportunity to share with the other international organisations, and KU partners, information on APSA's work in harmonising phytosanitary measures in the Asia and Pacific region, capacity building with respect to Plant Variety Protection and IPR as it relates to seeds, as well as APSA's recent position papers on IPR and abolishing child labour in the seed industry.

In a presentation about APSA's activities, Mrs. Gallant highlighted trends in the international movement of seeds to and from our region. “APSA is delighted to collaborate with KU on a number of initiatives as our

host organisation. We worked with KU on the Asia Solanaceous Round Table II which was held in February 2017 and we plan to co-host a cucurbit round table together in 2018,” said Mrs. Gallant.

“We also invite interns from KU, who are students studying plant breeding at the university, to work at APSA headquarters. A new KU initiative for later this year invites the heads of international organisations, such as myself, to be guest lecturers at KU economics courses. I am really eager to have this opportunity to share my knowledge with students about the field of NGO management and how industries work with NGOs like APSA to achieve their objectives.”

Another international organisation represented at the event was RECOFTC, which was founded by Dr. Somsak Sukwong, a KU professor, in 1987. Today RECOFTC continues to have a close relationship with many KU professor who are teaching the next generation of Thai foresters that to sustain Thai forests, decision-making must include local forest communities.

The World Vegetable Center Regional Director for East and Southeast

Asia/Oceania, Fenton Beed, remarked: “The Hi-Trees event was an excellent networking opportunity to showcase the work of key international organisations associated with KU and to identify potential areas for future collaboration.”

“The welcome speeches from KU Acting President Dr. Chongrak Wachrinrat and the Assistant to the Acting President, Buncha Chinnasri, as well as the closing speech from the chairman of the KU Council, Dr. Krissanapong Kirtikara, demonstrated a turning point in the age of the university's internationalisation and desire to build partnerships to achieve impact through research and development. The World Vegetable Center looks forward to furthering its 36-year relationship with KU and its key international partners such as APSA.”

Pepijn Schreinemachers, Flagship Programme Leader (Enabling Impact) and Lead Scientist (Impact Evaluation), who represented the Center at the KU Hi-Trees event, added, “It was fabulous to see the strong interest of senior KU management in the international organisations associated with them and this certainly raises interest from our side to strengthen further collaboration in research.” 🌱

APSA & TCEB Seminar Savvy

APSA Business Development Officer Suchada Yansarasin (right) took part in the ICCA Thailand Seminar 2017 “Power of Association”, presided over by Thailand Convention and Exhibition Bureau (TCEB) Director Ms. Vichaya Soonthornsaratoon.

“ICCA Thailand and TCEB have been organising this kind of seminar every year since 2013 in order to strengthen professional associations in Thailand, especially in their area of organising international conferences. It is TCEB's policy to promote Thailand as a destination of international conferences, and, in this connection, professional associations are our target of support as they are the key players in organising conferences,” said Ms. Vichaya.

APSA and TCEB are engaged in dialogue about further collaboration hosting Asian seed industry events in the Kingdom ahead of the 24th Asian Seed Congress, which takes place 13-17 November 2017 in Bangkok. 🌱



APSA Gets New Officers for Events and Membership Programmes



APSA is pleased to welcome two new skilled, experienced and cheerful Thai staff members to the Secretariat. Mike Kingpayom was appointed Events Officer at the end of May, while Membership Programmes Officer Kunaporn Phuntunil joined on 26 June.

Mike will be responsible for all aspects of the many functions that APSA hosts or partners throughout the year. The biggest is, of course, the annual Asian Seed Congress, the 24th edition of which is scheduled to take place later this year in Bangkok. In filling this important role, Mike has been given a mandate to consider the wide diversity of our international guests, while adhering to a budget that ensures our events are reasonably priced for our members. From event catering, logistics and venues, to master of ceremonies, entertainment, signage and production elements, Mike's task is to see that plans

for each APSA event are meticulous, and that appropriate contingencies are accounted for. Some of our members may recognise Mike, who is a well-known entertainment personality in Thailand and who brings to APSA his rich experience in the entertainment, events and hospitality industries.

As the newest addition to the Secretariat, Kunaporn or Kuna for short, is a multi-talented young woman who will work closely with APSA's members, committees and working groups, driving the development of new initiatives to better engage members and stakeholders with APSA. She will also work closely with APSA's Technical Director (Dr. Narendra Dadlani) on research consortiums, study tours and expert consultations, as well as support the work of APSA's Special Interest Groups and Standing Committees.

A Thai national who majored in Chinese language during her undergraduate studies, Kuna obtained her Bachelor of Arts from the prestigious Chulalongkorn University before working as a Programme Assistant and Secretary with the Asian Scholarship Foundation, where she was involved in graduate degree and research programmes related to arts, culture, humanity and social sciences in Asia. After her five-year stint with ASF, Kuna went on to pursue a Master's in International Peace Studies at the University for Peace, Costa Rica, and Ateneo de Manila University, the Philippines, under a full scholarship from the Nippon Foundation.

Mike and Kuna are worth getting to know better: read their full introductory interviews in the news section of our website (apsaseed.org) and look forward to warm welcomes from both when you meet. Contact either by e-mail: Mike (mike@apsaseed.org) and Kuna (kuna@apsaseed.org)

New APSA Members

AIDEX CO., LTD.

2-66, Toyomae-Cho, Higashi-Ku, Nagoya, 461-0034, Japan

BEIJING MANTIAN SEEDS CO., LTD.

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BEST SEEDS COMPANY

378/5, Sinha Place, Kalapaluwawa, Rajagiriya, Colombo, Rajagiriya, 10107, Western Province, Sri Lanka

DONGOH SEED CORPORATION

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JAVA KARLOS INDONESIA

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sjhwang@kyoungshin.com
skythelife@naver.com

SEED CO., LTD.

Seed Co Limited, 1st Floor, Northridge Park, Borrowdale, Harare, 00263, Harare, Zimbabwe

SHANGHAI KUNHE SEED INDUSTRY CO., LTD.

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UJJWAL SEEDS PRIVATE LIMITED

Plot No.12, Government School Road, Nangli-Poona, Delhi, 110036, India

Nurturing an Asian Seedling

Linda Barrios Muangsombut is a Transboundary Animal Disease Project Operations and Logistics Officer with the FAO Bangkok Regional Office and was one of APSA's early pioneers.



I was born in 1951 in Los Baños, Laguna, in the Philippines. I was the fourth child and eldest daughter of 12 siblings – seven boys and five girls. Growing up in a full house, I gained strong people skills that would prove invaluable to me for the rest of my life. My dad was a businessman and my mom a plain housewife. Can you imagine raising 12 kids? I truly am grateful for all their hard work raising me and my siblings.

My professional path to agriculture began at the University of the Philippines at Los Baños (UPLB), where I pursued a Bachelor's of Science in Agriculture, with a major in Weed Science. Honestly, the initial reason why I chose this field was because the university was reputable and not too far from home. But I've never looked back since. My interest in botany grew. I was inspired by one of my instructors, Mr. Jun Madrid, and my adviser, Dr. Beatriz Mercado, who encouraged me to continue with a Master's of Science in Horticulture with a focus on weed control, which was a relatively new academic discipline at the time.

There are some other important people I met at university. Namely, my husband, Wuthichai, who is a Thai government official who had pursued his graduate studies at UPLB. He's the reason I ultimately moved to Thailand after we both finished our studies and got married in 1978. Also, Noel Mamicpic, who was one of my mentors and supervisors at the seed technology laboratory where I was a graduate assistant, who I would coincidentally meet again many years later in Thailand when he was recruited to become APSA's first director.

Adapting to my new life in Thailand was difficult at first. It was hard to find good work back then, especially as a Filipina. At one point I was teaching basic English part time at the YMCA, but stable job opportunities were far and few. I remember calling home to my father to complain that I couldn't find a good job and missed home. My dad, who is very old-fashioned, responded, unsympathetically, that I didn't come to Thailand to work, but to be a wife! Nonetheless, I stuck it out, eventually qualifying to become a Thai citizen.

One day in 1981, I was reading the newspaper and came across a small advertisement from the FAO seeking a project liaison. I went to the FAO Regional Office in Bangkok to find out more.

The FAO was implementing an emergency rehabilitation project for Cambodians adversely affected during the Khmer Rouge regime and they needed a liaison based at their regional office in Bangkok. I got the job, which I worked on for the next few years. In 1982, an FAO Officer from Denmark, Mogens Lemonius, needed help with a regional seed project he was working on. At first, I split my time between the Cambodia project and Mogens' new project, which we referred to by its short codename: 103/DEN.

I eventually became Mogens' secretary/administrative assistant full time, helping him build up this little project. During that initial phase, the work involved garnering government interest, support and cooperation. By 1994, we entered into a third phase, codenamed GCP/RAS/153/DEN, in which

we could start to build a network. Working in close cooperation with the Thai Government's Seed Division, we set up an office at the Department of Agriculture Extension at Kasetsart University.

This little project was like our baby, and just like a small seed given ample time, love, care, will and energy, it would sprout and grow into a budding seedling that would form the foundations of APSA, founded officially in 1994. In the early years as an association, we survived with backing by the FAO and the Thai Government, but we ultimately had to get the association to be able to sustain itself.

To meet our objectives, we recruited André McNicoll, a Canadian, who helped Mogens with editorial duties and putting together the first Asian Seed newsletters. We brought on another Filipina, Mila Muangsiri, who helped build and maintain our database. We were a small but determined team. Eventually, Mogens recruited APSA's first director, Noel Mamicpic, and I was quite surprised and pleased to meet him at APSA after all those years.

APSA's success early on would not have been possible without the dedicated people – government officials, early presidents, EC members and consultants alike. Petcharat Wannapee (who was then the Director of Seed Division), Kuldip Chopra, Anthony Tse, Renato Mabesa, Heisan Koshibe, Nick Gardner, Simon Groot, Steven Preston, Chito Valmayor, Leonardo Ho, Chulhathep Pongsroypech, the list goes on.

By 1998, FAO's driving role and funding was coming to an end. But APSA was sustainable. I think we had about 200 members by the time I left. Having worked on the project for so many years, I was a little sad to move on, but also felt a strong sense of accomplishment. I learned so much working for APSA – the value of being goal and action oriented, patience, and the art of coordinating between and among stakeholders from various sectors and positions.

After APSA, I continued to realise success with a number of FAO projects, involving wood energy development and plant genetic resources, and finally returned to a similar project in which I had started: emergency rehabilitation relief, this time in the Pacific Islands (Fiji, Micronesia, Samoa, Tonga, Vanuatu, etc.), which have been drastically impacted by climate change. Reflecting back over the years, I have no regrets, and I would love to hear from old friends and associates from my old "baby", which has since grown up. 🌱



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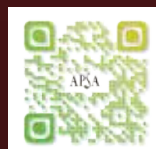
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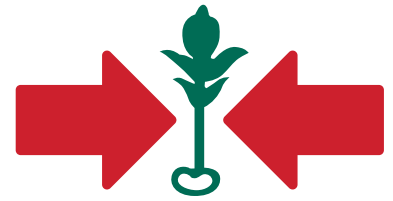
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